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> Canada. Hydrographic and Map Service Tide tables for the eastern coasts of Canada



TIDE TABLES

FOR THE

EASTERN COASTS OF CANADA

FOR THE YEAR

1912

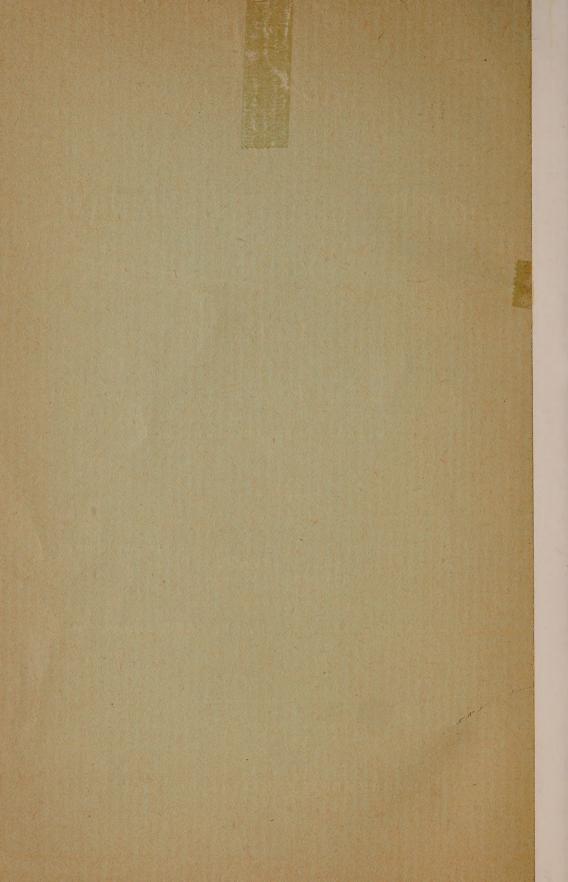
Including the River and Gulf of St. Lawrence, the Atlantic Coast, the Bay of Fundy, Northumberland and Cabot Straits; and Information on Currents.

Issued by the Tidal and Current Survey in the Department of the Naval Service of the Dominion of Canada.

(Sixteenth year of issue)

W. BELL DAWSON, M.A., D.Sc., M.Inst.C.E., F.R.S.C., Superintendent.

OTTAWA
GOVERNMENT PRINTING BUREAU
1911



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OTHER INFORMATION ISSUED BY THE TIDAL SURVEY.

TIDE TABLES FOR THE PACIFIC COAST OF CANADA.—Including Victoria, B.C., Clayoquot, Sand Heads in the Strait of Georgia, Vancouver, Prince Rupert and Port Simpson. With tidal differences for Esquimalt, New Westminster, Nanaimo, and other localities throughout the Strait of Georgia, and northward to Port Simpson; and information on the Currents in the various passes and narrows, with tables showing the time of Slack Water.

TIDE TABLES FOR POINTS ON THE ST. LAWRENCE SHIP CHANNEL.—Prepared specially and supplied, with other tidal information, for a publication issued by the Marine Department for the use of the Pilot service.

POCKET EDITIONS.—Two abridged editions in small size are issued; one containing the Tide Tables for Quebec and Father Point, and the other the Tide Tables for St. John, N.B. together with the time of arrival of the Bore at Moncton.

INVESTIGATION OF CURRENTS.—The permanent and tidal sets of the Current on the leading steamship routes are also being investigated by the Tidal and Current Survey. The regions now examined include the Gulf of St. Lawrence, Belle Isle strait, the Bay of Fundy and the offing of the South coast of Newfoundland. The results obtained have been published as pamphlets, copies of which may be had on application to the Department of the Naval Service, Ottawa. These pamphlets are as follows:—

"The Currents in the Gulf of St. Lawrence, including the Anticosti region, Belle Isle and Cabot straits." 28 pages. Describing the currents, and explaining the general circulation of the water in the Gulf.

"The Currents in Belle Isle strait," from investigations during two seasons. 43 pages with a Chart and three Plates illustrating the character of the current.

"The Currents at the Entrance of the Bay of Fundy, and on the Steamship Routes in its Approaches off southern Nova Scotia." 17 pages, with Tables and Chart of currents.

"The Currents on the South-eastern coasts of Newfoundland, and the amount of Indraught into the Larger Bays on the South coast." 33 pages, with eight Plates showing the set of the currents, and a general Chart.

"Tables of the Currents in the Bay of Fundy." Giving the direction and velocity of the currents, hour by hour, and the time of slack water, throughout the region extending from St. John, N.B. to Cape Sable. 15 pages, with Tables and Chart of currents.

Brief summaries of the more important results of these investigations are given on pages 54 and 55.

TIDE TABLES

FOR

THE EASTERN COASTS OF CANADA

FOR 1912.

These Tide Tables with Tidal Differences for other places, are issued by the Tidal and Current Survey, in the Department of the Naval Service of the Dominion of Canada. They are based upon observations obtained by means of self-registering tide gauges, which are kept in continuous operation day and night throughout the year. The records are reduced by the latest methods of analysis, by which the Tidal Constants are arrived at; and from these the six principal tide tables are calculated in the Nautical Almanac office, London.

TIDE TABLES FOR PORTS OF REFERENCE.—The Tide Tables for Quebec are based upon tidal record during thirteen complete years, between November 1893 and April 1908. The Tide Tables for Father Point are based upon tidal record during nine complete years; between January 1897 and October 1907. The Tide Tables for Halifax are based upon the analysis of a tidal record which was obtained during the years 1851, 1852, 1860, and 1861, together with the record obtained by this Survey during nine complete years, between October 1895 and July 1906. The Tide Tables for St. John, N.B. are based upon tidal record during ten complete years, between April 1894 and June 1905. The Tide Tables for St. Paul island, which commands the main entrance to the Gulf of St. Lawrence, are based upon tidal record during nine complete years, between October 1895 and December 1907. The Tide Tables for Charlottetown are based upon tidal record during two complete years; from October 1907 to October 1909.

As the accuracy of tide tables is represented by the length of the tidal observations on which they are based, the tables for Quebec, Father Point, Halifax and St. John are now superior to the tide tables for any harbour on the Atlantic coast of the United States, from Maine to the Gulf of Mexico.

TIDE TABLES FOR OTHER PORTS.—The tables for Cap à la Roche, on the Ship Channel above Quebec, are based on the Semaphore record throughout the seasons of 1901, 1902, 1903 and 1904, and on a tide gauge record from July to November in 1905 and 1906. These have afforded simultaneous comparisons with Quebec. They show a variation with the stage of the water as it becomes lower during the season, which is allowed for in the calculations.

The Traverse. The turn of the current in the Lower Traverse is based upon observations obtained in 1900, from May to September, taken day and night. The difference with the Upper Traverse is from simultaneous observations in 1900, compared with earlier observations in the seasons of 1896 and 1897.

Yarmouth. Computed from St. John, on the basis of simultaneous observations at the two places during two full years from 1898 to 1900.

Pictou. Calculated from Charlottetown by means of two series of variable differences, for high water and low water respectively; which vary with the phases of the moon during the lunar month. They are derived from simultaneous observations at the two places in the summer seasons of 1896, 1901, 1903, 1907 and 1908.

Tidal Differences.—By means of these differences, the time of the tide can be found for numerous ports, from the figures given in the principal tide tables.

W. Bell Dawson,
Superintendent of Tidal Surveys.

THE ST. LAWRENCE AND CHALEUR BAY.

LOCALITIES REFERRED TO QUEBEC.—From tidal observations taken in 1900 it was found that the tidal portion of the St. Lawrence above Orignaux point, or the Traverse, to the head of tide-water at Lake St. Peter, can all be referred to Quebec. The open estuary below Orignaux point can be referred to Father Point with much better results. Also, the upper part of the Saguenay can best be referred to Quebec, as the tide is similar in character.

In the river above Quebec the tidal differences vary with the season; as the tide takes a few minutes longer to run up the river in spring when the water is at a higher stage, than in autumn when it is lower and the current is less. The figures given are the average values.

The observations and other information on which the tidal differences are based, are given concisely in the list at the end of the tide tables.

LOCALITIES REFERRED TO FATHER POINT.—It has been ascertained by careful comparison of simultaneous observations, that the whole of the open estuary of the St. Lawrence below Orignaux point, can be referred to Father Point with the best advantage; together with Gaspé, the southern coast of Anticosti, and Chalcur bay.

WITH QUEBEC TIDE TABLES.

TIDAL DIFFERENCES for the St. Lawrence.

All results obtained, are in Eastern Standard time.

WITH FATHER POINT TIDE TABLES.

TIDAL DIFFERENCES for the St. Lawrence estuary.
All results obtained, are in Eastern Standard time except in Chalcurs bay, as noted.

	D	IF	FER	ENC	ES		RAN	NGE.
LOCALITY.	H.	o		I.	oi W		Springs.	Neaps.
	1.1.	,	'.	14.	*		202	Z
		н.	M.		н.	M.	Feet.	Feet.
Three Rivers	add	4	45	add	6	15	1	1
Champlain	17	4	10	11	5	30	3	1
Batiscan	11	3	35	83	4	48	$3\frac{1}{2}$	14
Cap à la Roche*	-11	2	36	11	3	47	7	334
Grondines	11	2	17	91	3	18	81/2	5
Lotbinière	11	2	09	· U	2	56	91	$5\frac{1}{2}$
Richelieu rapids								
Point Platon	- 11	1	42	11	2	11	$13\frac{1}{2}$	91
Ste. Croix	11	1	31	- 11	2	00	14	$9\frac{1}{2}$
St. Augustin	11	0	52	- 11	0	54	RISE. 16½	RISE.
St. Nicholas	11	0	35	11	0	35	17	12
QUEBEC.§	21	0	00	17	0	00	18	13
St. Laurent	sub	.0	20	sub	.0	30	$17\frac{1}{2}$	14
St. Jean d'Orleans	11	0	35	- 11	0	50	17½	14
Berthier		0	47	11	1	08	171/2	14
Grosse Isle	19	0	57	17	1	19	19	13
Crane island wharf		1	08	11	1	35	181	13
Beaujeu channel	11	1	10	-11	1	43	181	13
L'Islet	11	1	17	11	2	05	18	13
Coudres island	11	2	16	11	3	10	171	13
Chicoutimi, at head of Saguenay river		3	31	11	3	18	12	8

^{*}See full Tide Tables for Cap à la Roche as published herein.

[§] For the rise of Springs and Neaps at Quebec, hour by hour, see four pages further on.

	D	IF:	FER	EN	CES	5.	Rise o	F TIDE
LOCALITY.	H.	or			For		Springs.	Neaps.
	,	H.	M.		H.	M.	Feet	Feet.
Orignaux point	add	1	35	ad	d 1	48	17½	13
Murray bay	11	1	02	21	1	07	17	12
Rivière du Loup	-11	0	53	11	0	58	16	$10\frac{1}{2}$
Brandy Pots	11	0	46	12	0	49	17	10
Tadoussac	11	0	34	11	0	37	17	10
Green island	11	0	35	17	0	39	16	$9\frac{1}{2}$
Trois Pistoles	21	0	07	11	0	11	15	9
Escoumains	11	0	05	11	0	14	$16\frac{1}{2}$	$9\frac{1}{2}$
Bic island	11:	0	05	11	0	08	14	81/2.
FATHER POINT	11.	0	00	72	0	00	14	81/2
Little Metis	sub	,0	03	sul	b.0	03	13	8
Matane	11	0	05	11	0	05	11 .	7
Grand Mechins	11	0	08	11	0	09	12	7
Cape Chat	11	0	08	tt	0	10	13	. 8
Point de Monts	11	0	08	11	0	10	12	6
Seven Islands	11	0	29	11	0	28	9	5
Gaspé basin	11	0	07	11	0	31	5	3
ANTICOSTI ISLAND:-								
Ellis bay	sub	.0	43	sul	b.0	41	6	4
South-west point	11	1	04	25	1	02	6	4
CHALEUR BAY :								
Carleton point, Que	add	0	22	ad	d 0	16	8	5
In Atlantic time:-								
Dalhousie, N.B	111	1	33	.11	1	27	9	6
Campbellton, N.B	17	2	25				10	7
								0

THE ST. LAWRENCE RIVER AND ESTUARY.

SPECIAL FEATURES OF THE TIDE ABOVE QUEBEC.

From St. Augustin, where the first bars above Quebec occur, to the head of tide water at Lake St. Peter, the tides show unusual features; and their behaviour is also modified by the variation in the river level during the season. The mean level of the water in the river falls gradually from the high stage in spring to the low stage in autumn. The usual change in level from this cause is *five feet* from April to October.

The following are the most noteworthy features of the tide, carefully and concisely stated, with special reference to the lower stages of the river and the tidal low waters; as these are

of most importance in regard to the depth available for navigation.

(1) At Point Platon and above, Low Water at Neap tides falls lower than Low Water at Spring tides. At ordinary stages of the river, the lowest Low Waters of the month thus occur shortly after the moon's quarters. At the highest flood stages, the lowest Low Waters may be long after the moon's quarters, and they may even be as late as the date of the next new or full moon. (At Quebec, L. W. at Neap tides is on the average $2\frac{3}{4}$ feet above the level of L. W. at Spring tides, as usual. The reversal of their relative levels takes place in the neighbourhood of St. Augustin; being somewhat further up or down the river as the stage varies with the season.)

(2) Next in importance to the Springs and Neaps, is the variation in height caused by the change in the moon's distance. It is accordingly possible for Low Water at one of the Neap tides of the month, to be a foot and a half lower than the other. There is also a distinct diurnal inequality at times when the moon's declination is high. This may amount to a difference of more than one foot in the height of the two Low Waters of the same day. The inequality in the height of successive High Waters is much greater. Such variations should

not be attributed to wind disturbance, as they are strictly astronomical.

(3) Throughout the river, at Quebec and above, the range of the tide is reduced by the high stage of the river. The range thus becomes greater during the season, as the river falls; and accordingly, the decrease in the available depth at High Water, is not so great as the fall of the river itself would indicate.

(4) The Tidal Differences also vary with the season. As far as the Richelieu rapids, the time taken by the tide to run up the river from Quebec becomes less as the season advances; but above these rapids, the reverse is the case. The amount of this variation is 6 to 12 minutes.

Datum.—The Chart datum, adopted by the Hydrographic Survey, is the sloping surface

of the river at the exceptionally low stage observed in the autumn of 1897.

Stage of the River.—For the purposes of navigation, the best measure of the stage of the river is the height, above the Chart datum, of the lowest Low Water of each month. The values in the following table are thus measured.

	NEAP :	RANGE.	7/2			ST	AGE OF	THE R	CIVER.		
Locality.	High Stage.	Low Stage.	L. W. Springs above L. W. Neaps.	Average.	Month.	Point Platon.	Grondines.	Cap à la Roche.	Batiscan and Champlain.	Three Rivers.	Mean Value.
	Feet.	Feet.	Feet.	Feet.		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
Three Rivers	0.2	0.3	1.2	1.0	May	4.7	5.9	5.1	5.3	6.1	5.5
Champlain	0.8	1.0	1.1	2.8	June	4.2	4.6	4.0	4.3	5.1	4.4
Batiscan	1.0	1.3	1.0	3.4	July	3.8	3.8	3.1	3.1	3.0	3.4
Cap à la Roche	3.4	3.9.	1.1	6.9	August	3.0	2.7	2.0	2.1	2.1	2.3
Grondines	4.5	5.4	1.2	8.4	September	2.2	1.6	1.4	1.3	1.7	1.6
Lotbinière	5.4	6.0	1.2	9.2	October	2.0	1.5	1.3	1.2	1.4	1.4
Point Platon	9.0	9.7	1.3	13.5	November	2.1	1.7	1.4	0.9	1.2	1.4
Quebec	10.2	10.8	(Reversed)	18.0							

Depth available.—The above table gives the data from which the depth, in addition to the Chart soundings, may be found, by combining the figures for the Stage of the River with the Spring or Neap range. The results are based on observations obtained in 1887 and 1888 by Mr. R. Steckel; in 1901, 1902 and 1903 by the Hydrographic Survey; and in 1905 and 1906 by this Survey.

It is to be noted that the figures given, are average values for the month or for several seasons; without allowance for the notable variations which occur at certain times as above

explained.

CURRENTS OF THE LOWER ST. LAWRENCE

The relation between the turn of the current in the offing and the local tide had been ascertained during the Admiralty surveys and indicated on the charts. But the time of the tide itself at these localities was not known until observations taken in 1900 brought them into relation with Quebec, for which tide tables are published by this Survey. The Admiralty determinations have thus been reduced to the practical form given in the following table.

The Current in the Traverse.—This may be considered the crucial point on the Lower St. Lawrence, as the currents here attain their greatest strength. Observations of the turn of the current were obtained in 1900, from May to September. Also in the Upper Traverse, the swing of the light-ship had been noted in 1896 and 1897 from May to November; affording over 650 observations in each year, for comparison with the simultaneous record at the tidal stations.

The following features of the current are noteworthy:-

(1.) There is practically no variation from month to month in the time at which the

current turns. The monthly averages are well within 5m. of the general average.

(2.) During the course of the month, the only appreciable variation from the average is in the turn after Low Water. This occurs in two ways: Firstly, a variation which ranges in the Lower Traverse from 3h. 53m. at the springs to 4h. 07m. at the neaps; the general average being 3h. 57m. Secondly, for a few days when the moon is in high declination, north or south of the equator, the turn at Low Water may occur 15m. earlier or later than the average. At High Water, this variation is scarcely appreciable.

(3.) A direct comparison between the Upper and Lower Traverse, afforded by 284 signalled observations, shows that in the Upper Traverse the flood begins 5m. to 13m. earlier and

Flood stream | Fhb stream

the ebb 22m. earlier, than in the Lower Traverse.

Tidal Streams in offing of Localities named. Referred to time of tide at QUEBEC.	begins after or before L.W.	begins after or before H. W.	Duration of Flood.	Duration of Ebb.
Quebec harbour. St. Laurent Berthier Grosse Isle L'Islet.	0 02 " 0 19 before.	H. M. 1 05 after. 0 50 " 0 18 " 0 08 " 0 57 before.	H. M. 5 00 5 00 5 05 5 10 5 30	H. M. 7 30 7 25 7 20 7 10 6 50
Tidal Streams in offing of Localities named. Referred to time of tide at FATHER POINT.	Flood stream begins after L.W.	Ebb stream begins after H.W.	Duration of Flood.	Duration of Ebb.
In Upper Traverse. In Lower Traverse. (See complete tables). Orignaux point. In Brandy Pot channel. At White island Light-ship Tadoussac. Green island Bic island	3 57 " 2 18 " 2 04 " 2 08 "		6 00	H. M. 7 00 6 45 6 30 6 20 6 00 6 15 6 24 6 34

THE GULF OF ST. LAWRENCE AND NEIGHBORING STRAITS.

LOCALITIES REFERRED TO ST. PAUL ISLAND AND PICTOU.—From investigation of the tides throughout the southern half of the Gulf St. Lawrence, and comparisons with several of the principal tidal stations, it has been ascertained that these tides can best be deduced from St. Paul island, which commands the main entrance to the Gulf from the Atlantic. For this purpose a division is required into two regions as follows:-

(1) The open Gulf coast, including Miramichi bay and northern New Brumswick, and the north coast of Prince Edward island. The tides on these coasts can be referred to St. Paul island, provided that the difference in time is taken as EARLIER, or for the preceding tide. Otherwise the tidal differences are not constant, but vary so widely as to be practically valueless.

(2) Northumberland strait. This forms a special region, characterized by a marked diurnal inequality in the tide; and at the western end of the strait, in the vicinity of Shediac, the rise and fall is so slight that the time of

the tide is uncertain. The relation of this region to St. Paul island is complex; but by first calculating tide tables for Pictou by the method already explained, it can be utilized as a secondary port of reference in the middle of the strait itself, and the inequality in the two directions can thus be better distributed. For Charlottetown special tide tab es are calculated

The tides on both sides of Cabot strait can be referred directly to St. Paul island with good results; including the whole north-eastern coast of Cape Breton island, and some part of south-western Newfoundland. It is probable that a large part of the interior of the Gulf can also be referred to St. Paul island; but the tide in the greater part of the Gulf area has so small a range as to be of little importance to shipping.

WITH ST. PAUL ISLAND TIDE TABLES. WITH PICTOU TIDE TABLES. All results are in Atlantic Standard time. All results are in Atlantic Standard time. For H.W. For L.W. Locality. For H.W. For L.W. Locality. н. м. н. м. H. M. MIRAMICHI BAY AND RIVER :-Lower Neguac, at north entrance...... sub. 3 22 sub. 3 07 3 40 3 18 Oak point, at head of bay Georgetown.... 1 00 0.55 Chatham, N.B.... 2 50 2 30 Port Hood..... 1 02 Newcastle. (Observations at Nelson) 2 36 1 51 Cape Bear..... 0 57 2 31 1 06 Millerton Cape George..... 0 45 Cassilis. .. 2 16 11 0 50 PICTOU 0 00 n 0 00 NORTH COAST, P. E. ISLAND:— Alberton, P.E.I. Tatamagouche add 0 04 2 33 0 36 Richmond bay; within the entrance. 2 26 Charlottetown.. ... 0 36 add 0 51 Grand Rustico; at the lighthouse Cape Tormentine.... 0 23 .. 0 43 2 10 | St. Peters: at entrance to bay..... Baie Verte 0 0 27 CABOT STRAIT :-Neil harbour, C.B..... 11 0 19 sub. 0 23 Summerside n 0 50 .. 1 15 Sydney, C.B... NOTE.—The south-east coast of Cape Breton island, and the eastern angle of Newfound-Port aux Basques, Newfoundland add 0 17 add 0 17 land, are referred to Halifax.

CURRENT IN THE GUT OF CANSO.

In the Gut of Canso, the apparent irregularities in the turn of the current are due to the difference in the character of the tide itself, at the two ends of the Gut. The tide in the region of Northumberland strait shows a marked diurnal inequality, which accords with the declination of the moon; and while these changes recur periodically at the northern end of the Gut, the tide at the Atlantic end maintains the usual variation in height from springs to neaps with great regularity. As the current through the Gut depends on tides which are so different in character at its two ends, it necessarily shows great complexity.

THE ATLANTIC COAST OF NOVA SCOTIA.—TIDE AT QUEBEC.

LOCALITIES REFERRED TO HALIFAX.—The whole south-eastern coast of Nova Scotia can be referred to Halifax with advantage; and the tidal differences are small, as the tide is nearly simultaneous throughout this region.

From observations taken in 1902 from Shelburne to Yarmouth, it was found that ports in the vicinity of Cape Sable and eastward can best be referred to Halifax; while from Pubnico westward they can be referred to St. John, N.B., with greater accuracy. The limit eastward is at Scatari; as the north-eastern coast of Cape Breton island must be included with Cabot strait, and referred to St. Paul island. Some part of south-eastern Newfoundland can also be referred to Halifax with advantage, as indicated by observations at Trepassey near Cape Race.

WITH HALIFAX TIDE TABLES.

TIDAL DIFFERENCES; Atlantic Coast of Nova Scotia.
All results obtained, are in Atlantic Standard time.

TIDE AT QUEBEC.

Hourly height of the tide, above the Admiralty Low Water datum, as in the Tide Tables.

> Гир**е.** ge, 101 feet.)

> > Feet.

7.9

12·0 10·4 8·9

> 5·4 3·9

2.7

V.)..

All results obtained, a	are in 14 ti	апис оба				
	DIFFE	RENCES.	RISE O	F TIDE	SPRING TIDE.	NEAP T
Locality.	For H. W.	For L. W.	Springs.	Neaps.	(Average Range, 18 feet.)	
	н. м.	н. м.	Feet.	Feet.	Hour. Feet.	Hour.
Cape Sable, at Clarke harbour	add 1 33	add 0 54	11	9	At Low Water 0.0	At Low Water
Barrington passage	ł			61	1 h. after L. W 5·1	1 h. after L. W
Shelburne		₁₁ 0 13	7	51/2	2 h. " 10·0	2 h. " "
Liverpool bay	0 06		8	5	3 h. " " 13·9	3 h. " "
Lunenburg	11 0 08		7	6	100	
Mahone bay	sub.0 01		$7\frac{1}{2}$	$6\frac{1}{2}$	4 h. " " 16.9	4 h. 11 11
St. Margaret bay	n 0 00		7	6	$4\frac{3}{4}$ h. (At H. W) 18.0	5 h. 11 11
HALIFAX HARBOUR	n 0 00	0 00	6	5	1 h. after H. W 15.3	5½ h. (At H. V
Sable island, N. side	11 0 33		4			1 h. after H. W
Sable island, S. side	11 1 33		4		2 h. " · " 11·2	
Jeddore harbour	11 0 06			5.	3 h. " " 9·1	2 h. " "
Sheet harbour		1	$6\frac{1}{2}$	41/2	4 h. " " 7.0	3 h. " ".
Liscombe harbour			$6\frac{1}{2}$	41/2	5 h. " " 4·7	4 h. "
Country harbour			$6\frac{1}{2}$	$5\frac{1}{2}$		
Canso harbour			$6\frac{1}{2}$	4½	6 h. '" " 2·7	5 h. " "
Guysborough			$6\frac{1}{2}$	41/2	7 h. " " 6·9	6 h. 11 11
Arichat			5	4	7½ h. (At L. W.) 0.0	7½ h. (At L. W
St. Peter bay			6	4		77 %
Louisburg harbour	1 0 03		5	4	Variations in the Range.— tions from the average range	
Newfoundland:					the moon's distance. When	Perigee occurs
Cape Race, at Trepassey harbour	11 0 32	sub.0 52	$6\frac{1}{2}$	อ็	or full moon, the height of of month may be three feet month the moon is in high declinate	re than the other.

For Sydney and the region of Cabot strait, see differences with the Tide Tables for St. Paul island.

Variations in the Range.—The more important variations from the average ranges above given, are: (1) With the moon's distance. When Perigee occurs at the new or full moon, the height of one of the Spring tides of the month may be three feet more than the other. (2) When the moon is in high declination, N. or S. of the equator, a few days occur when the two tides of the day are quite unequal in range. At such times, the Spring range may be a foot and three-quarters more or less than the average. The Neap tides are similarly affected.

CURRENT IN NORTHUMBERLAND STRAIT.

The tide throughout this region is characterized by a marked diurnal inequality. This feature of the tide is under the influence of the declination of the moon; and it is most pronounced when the moon is in high declination, north or south of the equator. The period in which this variation recurs is the tropical or declination-month, which is over-run by the synodic month of the moon's phases. Hence when the variation is greatest, it occurs sometimes at the spring tides and sometimes at the neaps. The turn of the current in the strait has thus an appearance of great irregularity, which is usually attributed to the wind, whereas in reality it is almost wholly astronomical.

THE BAY OF FUNDY.

Localities referred to St. John, N.B.—The Bay of Fundy as a whole can be referred to St. John with advantage, as found from simultaneous tidal observations throughout the bay in 1898. From further observations taken in 1902, from Yarmouth to Shelburne, it was found that the outer part of the bay, as far as Pubnico, can best be referred to St. John; while ports in the vicinity of Cape Sable and eastward can be referred to Halifax with greater accuracy. with greater accuracy.

WITH ST. JOHN TIDE TABLES.

All results obtained, are in Atlantic Standard time for the 60th Meridian.

Localities in lower part	DIFFER	RENCES.	Rise o	F TIDE	ii		DIFFER- ENCES.	Rise o	F TIDE
of the Bay.	For H. W.	For L. W.	Sp'gs.	Neaps.		les in upper part f the Bay.	For H. W.	Sp'gs.	Neaps.
	н. м.	н. м.	Feet.	Feet.			н. м.	Feet.	Feet.
Lower East Pubnico	sub.1 56	sub.2 18	12	10	St. John H.	ARBOUR	add 0 00	27	23
Yarmouth harbour	. 1 07	1 15	16	13	Quaco		11 0 12	30	25
Grand passage	0 31	0 29	21	17		e, near Cape Chig-			
Petit passage	0 34	n 0 28	22	18			11 0 12		301
Weymouth	0 26	11 0 22	, 24	20		island	u 0 21	41	$34\frac{1}{2}$
Digby pier	" 0 18	11 0 17	. 271	23		; at mouth of Petitriver	0 24	45	38
Annapolis				24			u 0 46		*
Machine Scal island	Moneton								38
Grand Manan island :—									
Seal cove			20	15					
Grand harbour			21	173			11 14	503	431
Fish head			$22\frac{1}{2}$	181			" 1 08	*	*
Campobello island at			<u> 447</u>	103		uff		48	40
Welchpool	add 0 02	add 0 10	$23\frac{1}{2}$	20	Parrsboro	ugh pier	11 0 53	43	37½
Eastport, Maine‡				181	Spencer and	horage	11 0 17	39	33
St. Andrews	n 0 08	11 0 18	25	211	Black Rock	point	11 0 03	36	31
L'Etang harbour	0 01	11 0 05	231	20	Isle Haute.		sub.0 04	33	281
Lepreau bay	sub.0 01	11 0 .03	$24\frac{1}{2}$	21	Port George	e	11 0 07	32	28
Available Draught-			At E	I. W.	At.H. W.	The Bore at Mo			
given is the average amo as much as two feet, mo	re or less.	nay vary from the	Spring	g tides	Neap tides	August to November the arrival of the B			
average. All the wharves men at Low Water.					(Average)	means of a registering and night. From the has been deduced.	g gauge,	operati	ng day
Windsor—At the rail (At other wharves at Windsor) the Parrsborough pier—At Hopewell cape—At Dunlaph Moncton—At Dunlaphench of mattress work of the control o	indsor, the same.) the head of head of the wharf;	e draught of the pier he wharf, depth on	34 13	feet feet feet	6 feet 28 feet 7 feet	To find the time of subtract the following time of the next Hi as given in the tide. At Spring tides, such Average during the	ng amou gh Water e tables h ubtract 2l otract 2h.	nts from at St. erein:-h. 10m.	om the John
at low water(At other wharves al the draught is nea	ong the c	ity front	20:	1 feet	14 feet	Note.—Tables of the Bore are public Edition of the St. Jo	shed in	the Ab	ridge

^{*} River tide; does not fall to true low-water level. See draught given in lower table. ‡ For the tide in Eastern Standard time, add the tidal difference given, and then deduct one bour.

-	1						1]		1				
			JANU	JARY.							FEBRU	JARY.		
~		Ніен У	VATER.	Lo	w V	VATER.				High V	WATER.	Low	WATER.	
Date	Day.	Time. H't.	Time. H't.	Time.	H't.	Time.	H't.	Date.	Day	Time. H't.	Time. H't.	Time. H't	Time.	H't.
	Į,	н. м. гт.	н. м. гт.	н. м.		н. м.	FT.				н. м. гт.			FT.
礁	IVM.		15:17 15:9			22:39	1:8	1	Th,		16:47 15:9			
:2	Tu.	3:55 13.9	16:09 16:3	10:44	2.0	23:38	1.5	2	Æ.	5:19 14.3	17:39 16:6	0:18 1.1	12:23	0.7
:3	W.	4:45 14:4	16:59 16:8	11:43	1.8			3	Sa,	6:07 15.0	18:29 17:2	1:10 0.7	13:18	0.1
-3&	Th.	5:34 14.8	17:48 17:2	0:33	1.2	12:39	1.5	4	\$	6:54 15.6	19:19 17:3	1:58 0%	14:10	-0.3
5	F.	6:22 15.1	18:36 17:4	1:26	1.0	13:33	11	5	M.	7:41 15:9	20:08 17:1	2:42 0.7	14:58	- 0.2
6	Sa.	7:10 15:2	19:25 17:3	2:16	0.9	14:23	0.7	6	Tu.	8:27 16:1	20:57 16:6	3:23 0 9	15:42	-0.4
3	\$	7:58 15.2	20:15 17:0	3:03	0.9	15:11	0.4	7	W.	9:13 15.9	21:47 15.8	4:04 1:2	16:24	0.1
8	IM.	8:47 15:1	21:08 16:4	3:48	1.0	15:58	0 3	8	Th,	9:59 15:4	22:40 14:7	4:44 1.8	17:08	0.6
9	Tu.	9:38 14:8	22:07 15:6	4:33	1.3	16:46	0.4	9	F.	10:48 14:7	23:37 13:5	5:25 2:3	17:56	1.4
40	w.	10:34 14:4	23:13 14.6	5:19	1.8	17:35	0.8	10	Sa.	11:47 13:7		6:09 - 2:8	18:52	2.1
01.1	Th.	11:35 14:0		6:06	2.3	18:29	1.4	11	\$	0:42 12:5	12:56 12:9	7:02 3:1	19:52	2.7
12	F.	0:21 13.8	12:40 13.6	6:55	2.8	19:28	1.9	12	MI.	1:49 11:9	14:02 12:6	8:02 3 3	20:58	2.8
43	Sa.	1:26 13:2	13:43 13:5	7:50	3.1	20:33	2.2	13	Tu.	2:54 11:8	15:04 12:7	9:06 3:1	22:10	2.5
44	\$	2:26 12:9	14:41 13:6	8:50	3.3	21:40	2.3	14	W.	3:50 12:1	16:01 13:1	10:10 2:6	23:12	2.0
4.5	MI.	3:20 12:9	15:36 13:8	9:51	3.1	22:43	2.1	15	Th,	4:36 12:4	16:52 13:7	11:08 2:0		
26	Tu.	4:09 13:0	16:24 14:1	10:46	2.8	23:36	.1.8	16	F.	5:16 12:9	17:35 14:2	0.02 1.8	11:57	1.6
17	W.	⊺ 4:54 13•1	17:07 14:3	11:37	2.4			17	Sa.	5:51 13.3	18:13 14:7	0:42 17	12:40	1.2
a .8	Th.	5:36 13·1	17:46 14:4	0:24	1.8	12:31	2.2	18	\$	6:24 13:7	18:46 15:1	1:19 1:9	13:21	1.1
19	F.	6:15 13:2	18:22 14.6	1:06	1.9	13:02	2.0	19	M.	6:55 14.2	19:17 15:4	1:54 2:1	14:01	1.0
-20	Sa.	6:51 13·3	18:57 14·7	1:43	2.1	13:42	1.8	20	Tu.	7:25 14:7	19:47 15 6	2:28 2:4	14:40	1.0
21	\$	7:24 13:4	19:31 14.9	2:18	2.2	14:21	1.6	21	W.	7:56 15:3	20:18 15:7	3:01 2:1	15:18	1.1
22	M.	7:55 13.6	20:05 15:0	2:52	2.4	15:00	1.4	22	Th,	8:28 15:8	20:52 15:5	3:35 2:6	15:56	1.2
:23	Tu.		20:40 15.1		2.4	15.38	.1:3	23	F.	9:02 16:0	21:30 14.9	- 4:10 2:7	16:35	1.5
~24	w.	8:55 14:4	21:18 15.6	4:03	2.4	16:17	1.2	24	≽a.	9:41 15:7	22:14 13.9	4:47 2:8	17:17	2.0
-225	Th.		22:04 14:4		2.5	16:58	1.3	25	\$	10:29 14:9	23:14 12:6	5:29 3:0	18:11	2.6
26	IF.		 22:57 13 [.] 6		2.7	17:44	1.6	26	IVI.	11:34 13:9		6:26 3:3	19:28	3.2
27	Sa.		23:59 12.8			18:38	2.1	27	Tu.		13:07 13:3		20:50	3.3
128	ş		12:11 13:6			19:44	2.6	28	W.		14:31 13:6	8:58 3:1		
.29	PI.		13:36 13:6			21:02	2.7	29	Th.		15:42 14:6		23:07	
:30	Tu.		14:53 14.1	9:15		22:19	2.3			0.00 10 1	27/12/11/0	20.00 20 2	30101	
31	w.		15:52 15.0				1.6							
***************************************							l	<u> </u>		h is five ho				

The TIME used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the Datum for the soundings on the Admiralty chart of Quebec harbour.

LÉVIS DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 7.7 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Quebec, are given on page 6; and a table showing the turn of the TIDAL STREAMS on the St. Lawrence, on page 8.

=			– МАР	RCH.		·						API	RIL.			t alexanic gra
		HIGH '	WATER.	Low	WATE	₹.			Hie	3H 7	V _{ATER}		L	ow V	VATER.	
Date.	Day.	Time. H't.	Time. H't.	Time. H	t. Time	. H't.	Date.	Day.	Time. 1	H't.	Time.	H't.	Time.	H't.	Time.	TE
1	F.	н. м. гт. 4:18 13:5	н. м. гт. 16:40 15 ⁶		т. н. м	. FT.	1	M.	н. м. 5:34		н. м. 18:01		н. м. 0:24		н. м.	BTE. 0°22
2	Sa.	5:08 14:7	17:31 16:6	0:02 1	2 12:0	9 0.3	2	Tu.	6:10	17:7	18:41	17.6	1:05	1.8	13:22	0.2
3	5.	5:53 15.8	18:18 17:3	0:49 0	8 13:0	0-0.3	3	w.	6:45	18.1	19:20	17:3	1:45	2.2	14:05	06
4	MI.	6:36 16:6	19:04 17:5	1:33 0	8 13:4	3-0.5	4	Th.	7:21	18-1	19:59	16.8	2:24	2.6	14:47	12
. 5	Tu.	7:18 17:1	19:49 17:4	2:15 1	1 14:3	3-0.4	5	F.	7:59	17.7	20:39	15.9	3:02	3.0	15:28	1.8
6	w.	7:59 17:2	20:33 16.8	2:55 1	5 15:1	1 0.0	6	Sa.	8:40	16.9	21:21	14.8	3:39	3.3	16:10	24
7	Th.	8:40 16:9	21:17 16:0	3:34 1	9 15:5	5 0.6	7	5.	9:25	15.9	22:10	13.6	4:16	3.4	16:53	2.4.
8	. F .	9:22 16:3	22:04 14:8	4:12 2	'4 16:3	7 1.3	8	MI.	10:15	14.6	23:13	12.4	4:55	3.5	17:38	3.4.
9	Sa.	10:06 15:3	22:57 13.5	4:51 2	7 17:2	3 2.0	9	Tu.	11:16	13.3		!	5:40	3.6	18:30	3.8
10	5.	11:00 14:1		5:32 3	0 18:1	4 2.7	10	w.	0:35	11.7	12:44	12.6	6:37	3.7	19:34	4.(%
11	MI.	0:03 12:2	12:08 12:9	6:20 3	3 19:1	$2 \cdot 3 \cdot 2^{j}$	11	Th.	1:46 1	11.8	14:08	12.7	7:48	3.6	20:42	3.8.
12	Tu.	1:14 11:5	13:24 12:2	7:17 3	20:1	3.4	12	F.	2:44 1	12.4	15:09	13.4	8:54	3.1	21.42	3.4
13	w.	2:22 11:4	14:38 12:3	8:25 3	3 21:3	3.2	13	Sa.	3:33	13.4	15:57	14.4	9:53	2.5	22:33	3.T.
14	Th.	3:23 11 9	15:39 13.0	9:36 2	8 22:3	5 2.6	14	\$.	4:15 1	14·4 ¹	16:39	15.4	10:47	1.9	23:20	3.0
15	F.	4:14 12:7	16:30 13:9	10:37 2	23:2	7 2.2	15	M.	4:51	15.3	17:16	16.1	11:36	1.7		
16	Sa.	4:56 13.5	17:14 14:7	11:28 1	.5		16	Tu.	5:22	16:3	17:48	16.6	0:03	3.0	12:21	16
17	\$.	5:30 14.2	17:51 15:4	0:09 2	1 12:1	2 1.1	17	w.	5:52	17.0	18:19	16.8	0:44	3.3	13:05	17
18	MI.	6:00 14:9	18:22 15:9	0:46 2	12:5	3 1.1	18	Th.	6:22	17-7	18:51	16.8	1:24	1	13:48	2.0
19	Tu.	6:29 15.6	18:51 16:2	1:21 2	5 13:3	3 1.2	19	F.	6:53 1	18:21	19:26	16.6	2:03	3.7	14:32	2.3.
20	w.	6:57 16:3	19:21 16:4	1:55 2	·8' 14:1:	2 1.3	20	Sa.			20:05		2:43	3.8	15:18	2.6
21	Th.	7:25 16:9	19:53 16:3	2:30 3	1 14:5	0 1.5	21	5.	8:08	18.1	20:49	15.3	3:25	3.8	16:07	3.0
22	F.		20:28 16:0		2 15:2		22	M.			21:43		4:11		17:00	3.4
23	Sa.	8:30 17:3	21:09 15:2		3 16:10		23	Tu.		1	22:49		5:04		17:56	3.8
24	\$		21:58 14.0		3 17:0		24	w.	11:10				6:03		19:00	4.E
25	M.		22:59 12.6		5 18:0		25	Th.		-	19:41		7:08		20:08	4.0
26	Tu.	11:19 14:2			7 19:1		26	F.			14:08		8:21		21:14	3.6
27	w.		12:45 13:4		7 20:2		27	Sa.			15:14		9:34	-	22:15	3.1
28			14:18 13:8		3 21:4		28	\$.					10:36		23:08	2.8
29	F.		15:33 14:9	1	:3 22:4		29	IVI .					11:31		23:54	2.7
30	Sa.		16:32 16:0		.2 23:3	3 1.8	30	Tu.	5:08	17.6	17:38	17:3			12:20	1.1
31	5.	4:56 15.8	17:19 16:9	11:49		• • • • •										
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-		Ann. 470																	
					MA	Υ.		,							JU:	NE.			
		H	GH V	VATER]	Lo	w W	ATER.				H	IGH V	VATER.	[Lo	w W	ATER.	
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
		н. м.	FT.	н. м.	FT.	н. м.		н. м.	FT.			н. м.		н. м.		н. м.	FT.	н. м.	
1	w.	5:45	18.2	18:18	17.2	0:37	3.0	13:04	1.3	1	Sa.	6:38	17.5	19:14		1:30	4.1	41:08	3.1
2	Th.			18:57		1:17	3.4		1.9	2	\$.		17.1			2:09	4'1	14:47	3.2
3	F.	6:55	18.1	19:36	16.3		3.7		2.4	3	M.	7:54	16.6	20:31		2:47		15:25	3.6
4	Sa.	7:31	17.7	20:16	15.2	2:32	3.9	15:06	2.9	4	Tu.	8:33	16.1	21:11	14.1	3:26	3.7	16:03	3.7
5	5.	8:10	17.0	20:57	14.7	3:08	3.9	15:47	3.3	5	w.	9:15	15.5	21:54	13.7	4:06	3.2	16:42	3.7
6	PE.	8:52	16.2	21:40	13.9	3:46	3.8	16:28	3.5	6	Th.	10:05	14.9	22:42	13.4	4:49	3.3	17:23	3.8
7	Tu.	9:38	15.2	22:30	13.1	4:26	3.7	17:10	3.8	7	F.	11:08	14.3	23:42	13.2	5:37	3.2	18:09	3.9
8	w.	10:34	14.1	23:40	12.4	5:12	3:7	17:55	4.0	8	Sa.			12:25	13.9	6:30	3.3	19:02	4.1
9	Th.			12:00	13.4	6:06	3.7	18:50	4.2	9	5.	0:56	13.4	13:38	14.0	7:27	3.3	20:02	4.2
10	æ.	0:55	12.4	13:19	13.3	7:06	3.6	19:49	4.2	10	M.	1:58	14.1	14:37	14.4	8:29	3.3	21:02	4.2
11	Sa.	2:00	13.0	14:26	13.9	8:10	3.4	20:51	4.1	11	Tu.	2:49	14.9	15:26	15.0	9:32	3.2	21:59	4.1
12	\$.	2:52	13.9	15:22	14.7	9:14	3.0	21:49	3.9	12	w.	3:33	16.0	16:10	15.5	10:34	3.9	22:52	3.9
13	NI.	3:36	15.0	16:07	15.6	10:14	2.6	22:44	3.8	13	Th.	4:15	16:9	16:52	15.8	11:33	2.8	23:43	3.8
14	Tu.	4:15	16.1	16:44	16.5	11:07	2.4	23:29	3.7	14	F.	4:56	17.7	17:33	16.0			12:27	2.6
15	w.	4:52	17:0	17:19	16.6	11:56	2.3			15	Sa.	5:38	18.3	18:14	16.1	0:32	3.6	13:17	2.5
16	Th.	5:28	17.9	17:53	16.8	0:12	3.8	12:43	2.4	16	\$.	6:22	18.6	18:56	16.0	1:20	3.3	14:06	2.5
17	F.	6:03	18.5	18:23	16.7	0:54	3.9	13:29	2.6	1.7	IVE.	7:09	18.6	19:41	15.9	2:08	3.0	14:54	2.5
18	Sa.	6:38	18.8	19:05	16.4	1:37	3.9	14:16	2.7	18	Tu.	7:58	18.3	20:30	15.6	2:57	2.6	15:41	· 2· 5
19	\$.	7:16	18.8	19:44	16.0	2:22	3.8	15:04	2.9	19	w.	8:49	17.6	21:23	15.3	3:47	2.4	16:28	2.7
20	DE.	7:59	18.4	20:32	15.4	3:11	3.6	15:54	3.1	20	Th.	9:45	16.8	22:26	14:9	4:38	2.3	17:17	3.0
21	Tu.	8:50	17.6	21:30	14.6	4:02	3.2	16:47	3.4	21	F.	10:55	15.8	23:37	14.6	5:31	2.4	18:10	3.3
22	w.	9:51	16.5	22:37	13.9	4:55	3.4	17:42	3.7	22	Sa.			12:14	15.0	6:29	2.6	19:07	3.7
23	Th.	11:06	15.4	23:52	13.6	5:51	3.4	18:39	3.9	23	5.	0:46	14.6	13:28	14.7	7:32	2.9	20:06	4.0
24	F.			12:32	14.7	6:52	3.4	19:38	4.0	24	M.	1:50	14.9	14:30	14.6	8:38	2.9	21:06	4.0
25	Sa.	1:14	14.0	13:50	14.9	8:01	3.2	20:38	4.0	25	T'u.	2:47	15 4	15:24	14.7	9:45	2.8	22:05	3.9
26	\$.	2:23	14.9	14:50	15.4	9:08	2.8	21:38	3.8	26	w.	3:38	15.8	16:11	14.8	10:48	2.6	22:58	3.8
27	PH.	3:16	15.9	15:43	15.9	10:10	2.3	22:35	3.6	27	Th.	4:23	16.2	16;56	14.8	11:42	2.5	23:44	3.7
28	Tu.	4:02	16.8	16:31	16.3	11:07	2.0	23:26	3.6	28	F.	5:04	16.4	17:39	14.7			12:28	2.5
29	w.	4:43	17.4	17:14	16.3	11:58	2.0			29	Sa.	5:43	16.4	18:19	14.5	0:27	3.6	13:09	2.7
30	Th.	5:22	17.7	17:55	16.1	0:09	3.7	12:44	2.3	30	\$.	6:21	16:3	18:57	14.4	1:08	3.5	13:49	3.0
31	F.	6:00	17:7	18:35	15.8	0:50	3.9	13:27	2.7										
-				1															

The Time used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the Datum for the soundings on the Admiralty chart of Quebec harbour.

LEVIS DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 7.7 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Quebec, are given on page 6; and a table showing the turn of the TIDAL STREAMS on the St. Lawrence, on page 8.

			JU	LY.	- Alleria					AUG	UST.		=
'		HIGH V	WATER.	Low	WATER.				Нісн	WATER.	Low V	VATER.	
Date.	Day.	Time. H't.	Time. H't.	Time. H't	Time.	H't.	Date.	Day.	Time. H't.	Time. H't.	Time. H't.	Time. I	H't.
1	DI.	н. м. гт. 6:58 16 [.] 2	н. м. FT. 19:33 14.3	н. м. гт 1:48 3:-	н. м.	FT. 3·2	1	Th.	н. м. гт. 7:54 15 [.] 8	н. м. гт. 20:09 14:7	н. м. гт. 2:42 1 [.] 9	н. м.	FT. 2.8
2	Tu.	7:35 16:0	20:08 14:2	2:27 3:	15:06	3.3	2	F.	8:28 15:8	20:39 15:0	3:19 1.9	15:42	2.8
3	w.	8:13 15.9	20:43 14:2	3:05 2:	15:43	3.3	3	Sa.	9:03 15:6	21:12 15:3	3:57 1.7	16:18	2.8
4	The	8:52 15.7	21:18 14:3	3:44 2	16:19	3.3	4	5.	9:41 15:1	21;48 15.1	4:37 1:9	16:57	2.9
5	F.	9:33 15.4	21:54 14:3	4:24 2:	16:55	3.3	5	M.	10:25 14:3	22:33 14.8	5:20 2.1	17:40	3.1
6	Sa.	10:19 14.9	22:34 14:2	5:05 2	17:33	3.4	6	Tu.	11:20 13:3	23:32 14.2	6:08 2:6	18:28	3.4
7	\$.	11:15 14.2	23:28 14:0	5:49 2	18:15	3.6	7	w.		12:40 12:4	7:06 3:2	19:27	3.6
8	IVI .		12:22 13:7	6:44 2:	19:06	3.8	8	Th.	0:52 13.8	14:05 12:1	8:20 3:5	20:38	3.5
9	Tu.	0:30 14:0	13:34 13:5	7:47 3:	20:08	3.9	9	F.	2:14 14:0	15:13 12:5	9:44 3.2	21:54	3.1
10	w.	1:40 14.4	14:40 13:6	8:56 3:	21:15	3.9	10	ša.	3:21 14.8	16:03 13:3	10:54 2:6	22:58	2.3
11	Th.	2:44 15.1	15:37 14:0	10:07 3:	22:18	3.6	11	5.	4:18 15:9	16:56 14.2	11:51 1.8	23:54	1.4
12	F.	3:44 16.0	16:28 14:4	11:12 2:	23:17	3.1	12	IVI.	5:12 16:8	17:42 15.1		12:42	1.3
13	Sa.	4:35 16.8	17:16 14.9		12:09	2.4	13	Tu.	6:03 17:6	18:27 16:0	0:47 0:7	13:30	1.0
14	\$.	5:24 17:5	18:03 15.4	0:13 2:0	13:02	2.0	14	w.	6:52 18:0	19:12 16:6	1:37 0:1	14:15	0.9
15	IVII.	6:12 18:0	18:49 15:7	1:06 2:0	13:52	1.7	15	Th.	7:40 18:0	19:58 16:9	2:25 0.1	14:58	1.1
16	Tu.	7:02 18:2	19:36 16:0	1:57 1:5	14:39	1.6	16	F.	8:29 17:6	20:45 16 9	3:12 - 0:1	15:40	1.4
17	wi	7:53 18.1	20:24 16:1	2:46 1	15:24	1.6	17	Sa.	9:19 16.8	21:34 16:4	3:58 0:3	16:21	1.8
18	Th.	8:45 17:7	21:14 16.1	3:34 0:9	16:08	1.8	18	5.	10:10 15:6	22:24 15:6	4:43 0.8	17:03	2.3
19	F.	9:39 16.9	22:07 15.8	4:21 1:0	16:53	2 2	19	MA.	11:03 14:2	23:17 14:6	5:30 1.6	17:47	2.9
20	Sa.	10:37 16 0	23:02 15:2	5:10 1:3	17:39	2.7	20	Tu.		12:11 12:9	6:24 2:4	18:38	3.3
21	Ş.	11:39 14.8		6:02 1:9	18:27	3.5	21	w.	0:25 13:6	13:20 12:1	7:30 3.1	19:36	3.6
22	WE.	0:00 14.7	12:48 13:9	6:59 2:	19:19	3.7	22	Th.	1:40 12:9	14:29 11:8	8:41 3.3	20:39	3.5
23	Tų.	1:05 14.3	13:56 13:3	8:04 3:0	20:16	3.9	23	F.	2:45 12:9	15:29 12:1	9:50 2:9	21:47	3.0
24	w.	2:12 14:1	14:57 13:1	9:14 3:0	21:19	3.8	24	Sa.	3:40 13:4	16:20 12:5	10:51 2.4	22:49	2.3
25	Th.	3:10 14:3	15:48 13:2	10:19 2:8	22:20	3.9	25	5.	4:30 13:9	17:05 13:1	11:40 2:0	23:39	1.8
26	F.	4:03 14.6	16:35 13:4	11:18 2	23:17	3.0	26	IVIE.	5:15 14:5	17:42 13:6		12:22	1.8
27	Sa.	4:50 14.9	17:18 13:6		12:09	2.3	27	Tu.	5:56 15.0	18:15 14·1	0:20 1:4	13:00	1.9
28	\$.	5:32 15.1	17:58 13:7	0:06 2	12:54	2.3	28	w.	6:33 15.4	18:46 14·5	1:02 1.2	13:37	2.1
29	Mr.	6:11 15:3	18:35 13:9	0:48 2	13:32	2.4	29	Th.	7:06 15:6	19:14 15:0	1:42 1.2	14:10	2.4
30	Tu.	6:47 15:5	19:09 14:1	1:27 2:	14:07	2.6	30	F.	7:37 15:8	19:40 15.5	2:20 1:3	14:42	2,6
31	w.	7:21 15:6	19:40 14:4	2:05 2:	14:39	2.7	31	Sa.	8:07 15:9	20:07 15:9	2:57 1.4	15:15	2.7

The Time used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the Datum for the soundings on the Admiralty chart of Quebec harbour.

LEVIS DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 7.7 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Quebec, are given on page 6; and a table showing the turn of the TIDAL STREAMS on the St. Lawrence, on page 8.

			CED'EE	MBER.		-			ļ	C	OTO	BER.			
		High V		Low V	VATER.				Нісн	WATE			w V	VATER.	
te.	y.					_	Date.	,							
Date.	Day.	Time. H't.	Time. H't.	Time. H't.	Time. E	l't.	Da	Day.	Time. H'	Time.	H't.	Time. I	1 t.	Time	Ht.
-		H. M. FT.	н. м. гт.	н. м. гт.	н. м.	FT.			H. M. F						FT.
1	\$.	8:38 15:6	20:37 16:1			2.7	1	Tu.	8:36 14				2.2		3.0
2	IVX .	9:11 15:1	21:12 16:0	4:11 1.8		2.8	2	w.	9:18 14.					16:41	3.0
3	Tu.	9:49 14:2	21:55 15.4	4:52 2.2	17:03	2.9	3	Th.	10:11 12					17:36	3.2
4	w.	10:40 13:0	22:58 14:3	5:42 2.8		3.2	4	F.	11:32 11					18:46	3.3
5	Th.	11:56 11.7		6:44 3:4	19:00	3.4	5	Sar					3.7		3.1
6	F.	0:20 13:3	13:35 11.2	8:06 3:6	20:18	3.2	6	5.	1:39 13	2 14:34	12.0	9:04		21:18	2.3
7	Sa.	1:56 13.3	14:50 11.8	9:24 3:2	21:33	2.6	7	MI.	3:00 14					22:24	1.2
8	5.	3:10 14.2	15:48 13:0	10:33 2:4	22:42	1.6	8	Tu.	4:03 15				1.8	23:23	0.4
9	PE.	4:09 15:4	16:38 14.4	11:32 1:6	23:38	0.6	9	w.	4:52 16	5 17:06	16.4	11:59	1.4		
10	Tu.	5:02 16:5	17:25 15:6		12:23	1.0	10	Th.	5:35 17	2 17:47	17:3	0:14 -	- 0.5	12:42	14
11	w.	5:50 17:4	18:09 16:7	0:30 - 0:2	13:08	0.8	11	F.	6:16 17	4 18:26	17.9	1:02 -	-0.2	13:23	1.6
12	Th.	6:35 17:8	18:52 17:4	1:19-0:5	13:49	1.0	12	Sa.	6:58 17	2 19:04	17.9	1:48	0.1	14:03	1.9
13	F.	7:19 17:8	19:34 17:6	2:05 - 0:5	14:29	1.2	13	5.	7:40 16	6 19:43	17.6	2:32	0.6	14:42	2.3
14	Sa.	8:04 71.2	20:15 17:4	2:49 - 0.1	15:08	1.6	14	Mr.	8:23 15	8 20:23	16.8	3:14	1.2	15:21	2.5
15	\$.	8:50 16:4	20:56 16:8	3:33 0:4	15:48	2.0	15	Tu.	9:07 14	7 21:07	15.8	3:55	1.8	16:01	2.7
16	M.	9:38 15:2	21:41 15.8	4:18 1.1	16:30	2.4	.16	w.	9:54 13	4 22:00	14.5	4:37	2.4	16:42	2.8
17	Tu.	10:30 13:7	22:34 14:3	5:05 1:9	17:15	2.8	17	Th.	10:50 12	3 23:00	13.3	5:21	2 ·9	17:26	3.0
18	w.	11:35 12:3	23:38 13:2	5:56 2.6	18:04	3.1	18	F.		. 12:01	11.4	6:10	3.3	18:18	3.0
19	Th.		12:46 11	6:54 3:2	19:00	3.3	19	Sa.	0:13 12	3 13:14	11:3	7:10	3.2	19:23	2.9
20	F.	1:02 12:3	13:58 11:2	8:00 3:4	20:04	3.2	20	\$.	1:42 12	3 14:20	11.8	8:16	3.3	20:30	2.5
21	Sa.	2:21 12:3	15:02 11:7	9:08 3:2	21:12	2.7	21	M.	2:48 13	0 15:14	1 12.7	9:20	3.0	21:33	2.0
22	\$.	3:22 12:9	15:53 12:5	10:12 2:0	22:14	1.9	22	Tu.	3:40 13	9 16:00	13.7	10:13	2.6	22:28	1.5
23	MI.	4:13 13:7	16:35 13:	11:04 2:	23:09	1.3	23	w.	4:26 14	7 16:38	3 14.6	11:00	2.4	23:20	1.1
24	Tu.	4:56 14:6	17:14 14:	11:49 1:	23:56	1.0	24	Th.	5:06 15	4 17:09	9 15.4	11:42	2.4		
25	w.	5:33 15:2	17:49 14	7	. 12:28	2.0	25	F.	5:39 13	8 17:38	3 16.0	0:07	1.1	12:22	2.6
26	Th.	6:06 15.7	18:20 15:	0:38 0:	9 13:04	2.3	26	Sa.	6:08 13	9 18:00	6 16.6	0:51	1.3	13:01	2.9
27	F.	6:37 15.9	18:48 15	9 1:16 1	0 13:38	2.6	27	5.	6:36 18	18:3	4 17 (1:32	1.6	13:41	3.1
28	Sa.	7:06 16:0	19:14 16:	1:52 1:	3 14:11	2.8	28	ME.	7:06 18	19:0	6 17:3	2:13	1.8	14:22	3.2
29	5.	7:34 15:9	19:40 16:	8 2:28 1:	5 14:45	3.0	29	Tu.	7:40 18	5.2 19:4	4 17:2	2:56	2:3	15:04	3.1
30	M.	8:03 15:0	20:09 16:	9 3:06 1:	8 15:20	3.0	30	w.	8:19 1	20:3	1 16.7	7 3:42	2.6	15:48	3.0
							31	Th.	9:09 13	3:8 21:2	6 15.	8 4:31	2:	16:36	2.9

The TIME used is Eartern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the Datum for the soundings on the Admiralty chart of Quebec harbour, Lévis Dry Dock.—To find the depth of water on the sill of this dock at any tide, add 7.7 feet to the height of High Water as above given. The Tidal Differences referred to Quebec, are given on page 6; and a table showing the turn of the Tidal Streams on the St. Lawrence, on page 8.

			NOVE	MDET							DECEN	IDED.	===
		HIGH V	NOVE WATER.			ATER.				High V	DECEM		VATER.
Date.	Day.		Time. H't.		1		H't.	Date.	Day.		Time. H't.		1
1	F.	H. M. FT.	н. м. гт. 22:30 14 ⁵	н. м.		н. м.	FT. 2:9	1	5.	H. M. FT.	н. м. гт. 23:46 14·1	H. M. FT. 6:07 2:9	н. м. гт. 18:19 2·2
2	Sa.		23:51 13.6	6:24	-	18:35	2.9	2	IVIE.		10.01.10.0		
3	5.		12:53 12:0	7:28		19:44	2.7	3	Tu.		13:43 13.5		20:30 1:9
4	M.		14:12 12:8	8:38	3.3	20:56	2.1	4	w.	2:24 14.2	14:40 14:4	9:07 3:0	21:36 1.6
5	Tu.	2:46 14.4	15:10 14:2	9:44	2.8	22:03	1.3	5	Th.	3:19 14:7	15:31 15:4	10:03 2:8	22:37 1.2
6	w.	3:40 15:3	15:57 15:6	10:39	2.3	23:01	0.7	6	F.	4:08 15:0	16:18 16.1	10:55 2:5	23:32 1:0
7	Th.	4:30 16:1	16:41 16:7	11:27	2.0	23:54	0.4	7	Sa.	4:52 15.2	17:02 16:5	11:44 2·5	
8	F.	5:16 16:5	17:23 17:3			12:12	2.1	8	\$.	5:34 15.1	17:43 16·5	0:23 1:2	12:30 2.6
9	Sa.	5:59 16.5	18:04 17:6	0:42	0.5	12:54	2.3	9	MI.	6:15 14.8	18:23 16:4	1:10 1:5	13:13 2:7
10	5.	6:40 16:2	18:44 17:5	1:26	0.9	13:35	2.6	10	Tu.	6:56 14.4	19:04 16:0	1:54 1.9	13:54 2.7
11	WE.	7:20 15:6	19:23 17:1	2:08	1.4	14:15	2.8	11	w.	7:36 14:0	19:44 15.6	2:36 2:2	14:34 2.6
12	Tu.	8:01 14:9	20:02 16:4	2:49	1.9	14:55	2.9	12	Th.	8:17 13:7	20:25 15:2	3:16 2:5	15:13 2:3
13	w.	8:43 14.1	20:43 15:6	3:30	2.4	15:36	2.8	13	F.	8:59 13.4	21:08 14:7	3:54 2:6	15:52 2·1
14	Th.	9:28 13:3	21:30 14.6	4:12	2.7	16:18	2.7	14	Sa.	9:43 13:0	21:57 14.1	4:31 2:6	16:33 1.8
15	F.	10:19 12:5	22:29 13:6	4:55	2 ·9	17:03	2.5	15	5.	10:31 12:7	22:55 13.6	5:08 2.6	17:18 1.8
16	Sa.	11:21 11.9	23:39 12:9	5:41	3.1	17:51	2.5	16	M.	11:25 12:5		5:47 2.7	18:08 1:9
17	\$.		12:34 11.8	6:31	3.2	18:44	2.4	17	Tu.	0:00 13*1	12:25 12:4	6:32 2.9	19:03 2:0
18	W.	1:00 12:7	13:39 12.1	7:25	3.3	19:43	2.3	18	w.	1:13 12:9	13:26 12:7	7:26 3:0	20:02 2:1
19	Tu.	2:06 13.1	14;32 12.9	8:22	3.2	20:45	2.1	19	Th.	2:15 13·1	14:24 13:4	8:25 3.1	21:04 2:2
20	w.	2:59 13.7	15:18 13:8	9:19	3.0	21:46	1.8	20	F.	3:08 13:5	15:15 14:1	9:25 3.1	22:07 2:1
21	Th.	3:46 14:4	15:57 14 7	10:12	2.9	22:42	1.7	21	Sa.	3:54 13:9	16:00 15:0	10:23 3:0	23:09 2:0
22	F.	4:28 14:9	16:32 15·5	10:59	2.8	23:32	1.6	22	\$	4:36 14.1	16:39 15.7	11:18 2.8	
23	Sa.	5:07 15:3	17:06 16:2	11:44	2.9			23	M.	5:16 14:3	17:16 16.4	0:06 1:9	12:09 2:
24	5.	5:42 15.3	17:40 16:8	0:20	1.7	12:28	2.9	24	Tu.	5:55 14.5	17:54 16:8	0:56 1.8	12:59 2:3
25	M.	6:16 15.2	18:15 17:1	1:07	1.9	13:13	3.0	25	w.	6:35 14.6	18:35 17:0	1:44 1.7	13:48 1:5
26	Tu.	6:51 15:1	18:52 17:3	1:53	2.1	13:59	2.9	26	Th.	7:17 14:7	19:23 17:1	2:31 1.7	14:36 13
27	w.	7:29 14.8	19:33 17:2	2:39	2.3	14:46		27	F.	8:02 14.7	20:22 16:7	3:17 1.7	15:23 1:1
28	Th.	8:11 14:4	20:24 16:7	3:26	2.4	15:35	2.4	28	Sa.	8:52 14.6	21:24 16:2	4:03 1:7	16:11 0:9
29	F.		21:22 15:9		2 ·5		2.2	29	5.		22:29 15:4		17:01 1:0
30	Sa.	9:59 13.4	22:29 14:9	5:09	2.7	17:21	2.2	30	M.		23:38 14.5		17:56 1:5
						,		31	Tu.		12:00 13:8	6:32 2.6	18:56 1:6

The Time used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the Datum for the soundings on the Admiralty chart of Quebec harbour.

LÉVIS DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 7'7 feet to the height of High water as above given. The TIDAL DIFFERENCES referred to Quebec, are given on page 6; and a table showing the turn of the TIDAL STREAMS on the St. Lawrence, on page 8.

13328—3

==													- ==
			APRII					,	, , , , ,	MAY.			
Date.	Day.		WATER.		VATER.	Moon.	Date.	Day.		WATER. After'n.	Morn'g.	VATER.	Moon.
		Morn'g.	After'n.	Morn'g.	After'n.	-				,		After'n.	
1 1 2 3 3 4 4 5 5 6 6 7 8 9 1 1 1 1 2 1 1 3 1 4 1 5 5 1 1 6 6 7 1 1 2 2 2 2 2 2 2 2 3 3 0	M. Tu. W. Th. F. Sa. M. Tu. Yh. F. Sa. S. M. Tu. Yh. F. Sa. S. M. Tu. Th. F. Sa. S. M. Tu. Tu.	H. M. 48 040 9 15 9 51 11 10 29 11 1 55 14 6 03 4 16 6 45 7 21 7 52 8 52 9 23 9 57 10 38 11 26 0 13 1 19 2 41 4 04 5 12 6 10 6 58 7 38	H. M. M. 20 31 21 11 21 50 22 29 23 51 12 45 13 46 15 14 16 38 17 39 18 27 19 09 19 46 20 18 20 49 21 21 21 56 22 35 23 19	H. M. 4 11 4 52 5 32 6 11 6 49 7 26 8 03 8 42 9 27 10 24 11 35 0 29 1 29 2 20 3 07 3 50 4 31 5 11 5 50 6 30 7 12 7 58 8 51 9 50 10 55 3 41	H. M. 40 16 24 17 09 17 52 18 34 19 15 19 57 20 40 21 25 22 17 23 21 12 41 13 40 14 34 15 23 16 08 16 52 17 35 18 19 9 05 18 19 9 05 19 54 20 47 21 43 22 47 23 55 12 08 13 21 14 23 15 18 16 07		1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 13 14 15 11 17 18 19 20 21 22 23 24 25 26 27 28 30 31	W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Tu. W. Th. F.	H. M. 8 16 8 51 9 26 10 02 10 41 11 23 0 11 1 1 01 2 11 3 26 6 07 23 7 59 8 34 9 09 9 47 10 30 11 21 0 01 1 08 2 33 3 45 4 54 4 7 53 8 31	H. M. 920 499 21 28 22 07 22 47 23 28 12 09 13 05 14 31 15 50 16 57 17 53 18 38 19 15 19 50 20 24 20 59 21 36 22 15 23 03 12 22 15 23 03 12 22 15 23 03 16 21 17 21 18 14 19 02 19 45 20 26 21 06	H. M. 4 24 5 42 6 19 6 55 7 33 8 13 8 59 9 53 10 53 10 53 11 57 0 38 1 36 2 31 3 16 3 59 4 41 5 24 6 09 8 42 9 38 10 39 11 48 0 25 1 25 2 22 2 31 3 56 4 37	H. M. 16 51 17 32 18 12 18 53 34 20 15 20 57 21 42 22 37 23 36 14 15 43 16 30 17 16 18 03 18 51 19 41 20 34 21 29 22 26 23 25 13 57 14 54 15 45 16 31 17 14	•
		ı	JUNE				O .			JULY.			
12 3 3 4 4 5 6 6 7 7 8 8 9 100 1112 1134 115 116 117 118 119 200 211 22 23 24 25 26 27 28 8 29 30	Sa. S. M. Tu. Yh. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. Sa. S.	H. M. 9 100 9 48 10 26 11 05 11 47 0 26 1 1 14 2 14 3 28 4 30 5 21 6 05 6 47 7 28 8 10 8 54 9 41 10 30 11 21 0 58 2 09 3 18 4 22 5 19 6 10 6 55 7 36 8 53	H. M. 21 46 21 46 22 24 23 03 23 43 23 43 23 43 23 43 23 43 23 43 24 12 37 16 10 17 09 17 58 18 42 19 24 20 05 20 46 21 28 22 13 23 02 23 55 12 17 13 27 14 46 16 00 17 02 17 56 18 43 19 28 20 11 20 51 21 29	H. M. 5 17 5 56 6 34 7 13 8 36 9 24 10 17 11 14 0 49 1 46 2 39 3 30 4 19 5 07 5 55 6 44 7 34 8 25 9 18 10 16 11 19 0 53 3 1 52 2 45 3 31 4 14 4 55	H. M. 17 55 18 34 19 12 19 50 29 21 10 21 56 22 49 23 49 12 16 14 17 53 18 41 17 52 00 15 18 21 57 22 54 23 53 12 25 13 32 25 14 35 15 29 16 15 56 17 36		1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 30 31	M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F.	H. M. 9 322 10 09 10 47 11 26 10 28 1 08 2 02 3 04 4 14 5 18 66 18 7 09 36 10 27 11 19 136 2 34 4 46 5 44 46 5 44 8 06 8 46 9 21 9 55	H. M. 222 077 222 422 32 17 12 53 13 49 14 566 16 08 17 14 18 11 19 02 19 50 37 21 23 222 10 22 58 23 48 12 13 15 22 16 30 17 31 18 22 20 32 21 09 19 52 20 32 21 43 22 14	H. M. 6 5 35 6 14 6 52 7 31 8 11 8 52 9 36 10 31 11 34 11 34 11 8 53 5 14 4 90 4 53 5 14 1 51 0 03 1 06 2 07 3 04 3 55 14 5 52	H. M. 18 15 18 53 19 30 20 06 20 42 21 20 22 02 22 53 23 55 12 43 13 54 14 59 17 39 18 26 19 11 19 55 20 40 22 14 23 06 19 11 19 55 20 40 21 26 22 14 23 06 15 05 15 05 16 41 17 19 17 54 18 26	

The Time used is Eastern Standard for the 75th Meridian. It is counted from 0 to 24 hours, from midnight to midnight.

At Cap à la Roche, the lowest tides are not at the springs. The lowest low waters usually occur a few days after the Moon's quarters. See explanations and table on page 7.

-								oler wr					
			AUGUS							SEPTEN			
Date.	Day.		VATER.	Low V		Moon.	Date.	Day.		WATER.	Low		Moon.
<u>A</u>	<u></u>	Morn'g.		Morn'g.	After'n.	=	1	<u> </u>	Morn'g.	After'n.	Morn'g.	After'n.	=
1 2 3 4 5 6 7 8 9 10 11 12 11 13 11 14 11 15 11 16 11 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Th. F. Sa. S. M. Tu. F. Sa. S. M. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. Sa. S. M. Tu. W. Th. Sa. Sa. Sa. Sa. Sa. Sa. Sa. Sa. Sa. Sa	H. M. 10 30 31 10 44 16 16 7 06 16 7 51 8 32 9 9 42 10 13 10 43 11 43 10 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 43 110 44 16 110 12	H. M. 22 45 23 15 23 48 12 17 13 01 13 56 15 16 41 17 49 18 44 19 32 20 18 22 34 23 21 12 46 13 39 14 47 15 56 17 05 18 05 18 05 18 05 18 20 51 20 18 20 51 20 18 20 51 22 1 50 22 16 22 43	H. M. 6 29 7 06 77 44 48 24 45 24 45 8 30 9 17 10 11 11 17	H. M. 18 57 19 29 20 05 20 44 21 27 22 15 23 14 12 07 13 31 14 41 15 38 16 29 17 17 18 02 18 45 19 27 20 08 20 50 21 34 22 25 23 23 12 28 13 37 14 38 15 27 16 09 16 47 17 24 17 57 18 29 19 02		1 2 3 4 4 5 6 6 7 7 8 9 10 0 11 12 13 14 15 16 6 17 18 19 20 21 22 23 24 22 5 26 27 28 8 30	5. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. F. Sa. F. Sa. F. M. Tu. W. Th. Sa. F. Sa. M.	H. M. 11 16 11 49 33 1 36 2 58 4 34 4 55 48 66 47 7 40 8 28 9 13 9 57 10 42 11 28 0 19 1 12 2 16 3 40 4 59 6 00 6 51 7 34 8 11 8 14 9 15 9 44 10 12 10 41	H. M. 23 15 23 50 12 27 13 18 14 34 16 13 17 28 18 26 19 16 20 03 34 12 16 20 22 12 22 53 23 34 12 16 36 17 40 18 31 19 52 20 27 20 58 21 26 21 52 22 18 22 47	H. M. 72	H. M. 19 366 20 11 20 50 21 39 22 47	
			OCTOBI	ER.						NOVE	MBER.		
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 21 22 23 24 25 26 27 28 29 30 31 31 31 31 31 31 31 31 31 31 31 31 31	Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Tu. W. Th.	11 16 11 58 0 10 1 14 2 35 4 19 5 40 6 43 7 32 8 15 8 56 9 38 10 20 11 03 11 47 0 40 1 40 2 53 4 22 5 28 6 20 7 06 7 46 8 19 8 48 9 16 9 46 10 20 10 59 11 49	23 24	7 34 8 20 9 15 10 21 11 37 1 05 2 11 3 10 4 01 4 49 5 35 6 19 7 01 7 42 8 24 9 08 8 24 9 57 10 57 0 17 1 20 2 15 3 3 07 4 38 5 19 6 4 38 5 19 6 4 38 5 19 6 4 38 5 19 6 4 38 6 4 38 7 29 8 18	19 45 20 28 21 23 22 23 23 49 12 51 13 57 14 56 16 29 17 10 18 29 19 48 20 29 21 13 22 05 19 48 19 08 19 48 20 29 21 13 22 05 112 03 13 07 14 00 14 47 15 29 16 09 16 48 17 28 18 09 18 51 19 35 20 23	♦	1 2 3 4 4 5 6 7 8 9 10 11 1 13 14 15 16 17 1 15 16 20 21 22 23 24 25 26 27 28 29 30	F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Sa. Sa.	0 06 1 12 2 33 4 09 5 28 6 22 7 12 7 58 8 41 9 22 10 02 10 43 11 25 0 12 1 11 2 21 1 11 2 4 48 5 41 6 28 7 10 7 49 8 24 4 8 9 33 10 11 10 53 11 43 0 04	12 52 14 06 15 35 16 54 17 52 18 39 19 23 20 05 20 46 21 26 22 44 23 25 12 10 13 01 14 03 15 16 21 17 14 18 00 18 39 19 14 19 48 20 22 21 34 22 25 12 10 13 01 14 18 00 18 39 19 14 19 48 20 22 21 34 22 15 23 41 24 25 25 12 10 26 21 10 27 46 28 25 29 44 20 57 21 34 22 15 20 20 36 20 18 39 20 22 35 21 34 22 15 23 36 24 34 25 12 10 26 27 36 27 36 28 39 29 38 39 20 38 38 38 38 38 38 38 38 38 38 38 38 38	9 12 10 11 11 15 	21 20 22 22 23 31 12 25 13 31 14 26 15 14 15 59 16 41 17 22 18 02 19 23 20 05 21 38 22 31 23 30 12 09 13 56 13 59 14 46 15 31 16 15 17 00 17 46 18 33 19 22 20 14 21 08	•

The TIME used is Eastern Standard, for the 75th Meridian. It is counted from 0 to 24 hours, from midnight to midnight.

At Cap à la Roche, the lowest tides are not at the springs. The lowest low waters usually occur a few days after the Moon's quarters. See explanations and table on page 7.

			APRIL.							MAY			
Date.	Day.	H. W. S		L. W. S (Flood b		Moon.	Date.	Day.	H. W. (Ebb b		L. W. S		Moon.
11 23 44 56 67 89 10 11 11 11 11 11 11 11 11 11 11 11 11	M. Tu. W. Th. F. Sa. S. M. Tu. Th. F. Tu. Th. F. Tu. Th. Th. Th. Th. Th. Th. Th. Th. Th. Tu.	H. M. 5 13 5 51 6 27 7 02 7 38 8 16 8 57 9 42 10 40 11 58 3 23 3 3 56 4 27 4 57 5 28 6 00 6 35 7 13 7 54 8 44 8 9 45 10 53 115 2 23 3 19 4 04 4 43	H. M. 17 32 18 15 18 56 19 35 20 13 20 52 21 35 22 31 23 49 13 21 14 33 15 21 16 02 16 39 17 14 17 48 18 23 19 00 19 41 20 29 21 26 22 36 22 36 22 36 22 36 22 36 13 29 14 43 15 38 16 26 17 10	H. M. 111 39 0 02 0 34 1 05 1 37 2 111 2 48 3 28 4 15 5 26 6 7 11 2 6 7 11 26 1 1 26 1 1 1 4 1 5 4 2 38 3 26 4 32 5 5 7 7 33 3 8 47 9 46 10 37 11 23	H. M. 12 21 13 02 13 42 14 23 15 06 15 54 16 53 18 10 19 54 20 57 21 42 22 15 23 14 23 42 11 20 44 12 42 13 21 14 49 15 45 16 49 18 14 19 39 20 44 19 39 20 45 23 33		1 2 3 4 5 6 6 7 8 9 10 11 11 12 13 11 15 16 17 18 19 20 21 22 22 23 24 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	W. Th. F. Sa. S. M. Tu. Y. Sa. S. M. Tu. Th. F.	H. M. 5 20 5 56 6 32 7 09 9 14 10 07 11 16 0 37 1 41 2 29 3 09 3 47 4 24 5 00 5 36 6 14 6 56 6 7 43 8 35 9 33 10 39 11 51 0 47 1 48 2 43 3 32 4 16 4 57 5 36	H. M. 177 551 18 30 19 08 19 47 20 27 21 11 22 07 23 20 24 14 32 15 19 35 20 24 17 22 27 23 20 24 21 21 22 27 23 39 15 07 16 00 16 49 17 32 18 13	H. M. 0 06 0 38 1 11 1 46 2 24 3 05 3 552 4 59 6 23 7 41 8 47 9 37 10 21 11 02 11 42 0 12 0 54 1 40 2 20 3 27 4 33 5 53 7 15 8 33 9 29 10 19 11 06 11 50	H. M. 12 06 12 47 13 24 14 03 14 43 15 27 16 20 17 28 18 49 19 53 20 39 21 18 21 54 22 28 23 31 3 06 13 52 14 45 15 42 16 45 17 51 18 58 20 02 20 56 21 37 22 17 22 56 21 37 22 17 22 57	
	,	,	JUNE	,					1	JULY	,		1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 22 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. Tu. W. Th. F. Sa. S. M. Tu. Sa. S. M. Tu. Sa. S.	H. M. 6 14 6 52 7 31 8 11 8 53 9 41 10 35 12 59 3 44 4 29 9 5 14 6 00 6 48 7 38 8 29 9 22 10 19 11 24 0 09 2 08 3 01 3 49 4 34 5 17 5 58	H. M. 18 53 19 32 20 12 20 54 421 41 22 36 23 35 14 31 15 23 16 13 17 02 20 12 12 22 08 23 07 12 33 41 14 43 15 39 16 29 17 12 17 53 18 33	H. M. 0 11 0 48 1 26 2 05 2 46 3 32 4 27 5 66 8 59 9 50 10 38 11 25 12 11 0 39 1 28 2 20 3 17 4 20 5 30 6 49 9 09 10 09 10 09 11 42 12 22	H. M. 13 10 13 48 14 27 15 08 14 27 15 08 16 43 17 37 18 33 19 26 20 15 21 01 21 45 22 28 23 10 23 53 12 58 13 46 14 35 15 25 16 17 17 13 18 12 19 12 20 11 21 03 21 49 22 33 23 14 23 54 13 00	•	1 2 3 4 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	M. Tu. W. Th. Sa. S. M. Tu. Y. Th. F. Sa. Tu. Y. Th. F. Sa. Tu. Y.	H. M. 6 38 7 17 7 55 8 33 9 12 9 53 10 41 11 37 0 20 1 15 2 13 3 12 4 10 5 54 6 42 7 29 9 58 10 55 11 56 0 24 1 29 2 35 3 32 4 23 5 09 5 50 6 27 7 02	H. M. 19 12 19 51 12 20 31 21 12 22 1 54 42 22 39 23 28 15 49 16 45 17 20 04 20 50 21 37 22 27 23 23 16 21 17 08 17 47 18 23 18 57 19 30	H. M. 0 33 1 11 1 1 50 2 30 3 13 3 59 4 50 5 51 7 01 8 13 9 24 10 27 11 16 12 02 0 35 1 24 2 14 3 06 4 02 5 03 6 13 7 31 8 47 9 58 10 57 11 39 12 15 0 59	H. M. 13 36 14 11 14 47 15 24 16 62 17 25 18 12 19 04 20 01 21 58 22 53 23 45 12 47 13 32 14 18 15 51 16 39 17 29 18 23 19 20 20 18 21 16 22 10 22 58 23 41 12 47 13 16 13 44	

The Time used is Eastern Standard, for the 75th Meridian, as in the other St. Lawrence tables.

UPPER TRAVERSE.—To find the turn of the current in the Upper Traverse, subtract 22 minutes at High
Water and subtract 5 minutes at Low Water from the time given in the above tables.

Effect of the Moon's Declination.—When the moon is in high declination, north or south of the equator,
a few days occur when the turn of the current at Low Water may be 15 minutes earlier or later than given in the
tables. At High Water, the variation is scarcely appreciable.

=	1	1					11)					==
			AUG	UST.						SEPTE	MBER.		
Date.	Day.	H. W. (Ebb b	SLACK.	L. W. (Flood		Moon.	Date.	Day.		SLACK.	L. W. (Flood		Moon.
1 2 3 3 4 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 4 25 5 26 6 29 30 31	Th. F. Sa. F. Sa. F. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. W. Th. F. Sa. F. M. Tu. W. Th. F. Sa.	H. M. 7 36 8 09 8 42 9 16 9 55 10 43 11 44 0 24 1 37 2 49 3 52 2 49 5 41 1 13 7 57 8 41 1 13 21 4 14 4 57 5 34 6 08 6 40 7 11 7 41	H. M. 200 02 34 21 07 21 44 22 27 23 20	H. M. 1 36 2 12 2 48 3 27 4 11 5 03 6 09 11 03 11 50	H. M. 14 12 14 41 15 12 15 46 16 28 17 03 17 46 19 03 20 29 21 37 22 41 3 51 14 31 15 11 15 52 16 35 17 24 18 25 19 43 21 03 22 53 23 32 21 21 21 46 13 12 14 47 13 13 14 07	9	1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 29 30	5. M. Tu. W. Th. F. Sa. S. M.	H. M. 8 12 8 45 9 24 10 14 11 23 34 4 40 5 24 4 40 5 24 13 9 00 9 51 10 49 11 56 0 13 34 5 07 5 37 6 6 6 36 7 08 7 43	H. M. 20 27 21 54 22 52 14 16 15 25 16 21 17 06 17 47 19 07 19 48 20 30 21 14 22 03 23 02 13 22 14 51 15 52 16 26 17 23 17 53 18 51 19 21 19 54	H. M. 2 19 2 58 3 42 4 36 5 53 7 30 8 51 9 59 10 49 11 31 0 15 1 44 2 28 3 13 4 01 5 00 6 22 8 16 9 27 10 17 10 51 11 20 11 46 0 14 6 1 20 1 57	H. M. 14 36 15 06 15 40 16 28 17 34 19 01 20 23 21 37 22 37 23 28 12 09 12 46 13 22 15 67 14 32 15 47 16 34 17 45 20 43 21 48 22 31 22 08 23 42 12 10 12 33 12 57 13 57 13 57	•
	!	1	OCTOBE	ZR.		1			, t	NOVEM	IBER.		
1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. Tu. W. Th. Th. Th. Th. Th. Th.	H. M. 8 22 9 08 10 04 11 19	H. M. 20 34 21 24 22 26 23 45 12 47 14 09 15 13 16 01 16 44 17 24 18 03 18 41 19 19 19 58 20 39 21 25 22 21 25 22 21 25 25 22 21 16 46 44 17 15 17 47 18 20 18 55 19 33 20 17 21 09	H. M. 2 38 3 25 4 23 5 39 7 07 8 29 9 33 10 23 11 04 11 41 0 01 1 26 2 07 2 49 3 33 4 29 9 26 10 00 10 29 10 57 11 24 11 52 0 10 26 1 02 1 41 2 43 14	H. M. 14 33 15 14 607 17 23 18 49 20 23 21 30 22 27 23 16 12 16 12 50 13 23 15 13 16 03 17 08 18 47 20 19 21 13 21 58 22 39 22 39 23 51 12 12 52 13 27 14 57	•	1 2 3 4 4 5 6 6 7 7 8 9 10 11 1 13 14 15 16 6 17 18 19 20 22 23 24 25 26 27 28 29 30	F. Sa. S. M. Tu. W. Th. Sa. S. M. Tr. W. Th. F. Sa. S. M. Tr. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Sa. Sa.	H. M. 9 56 11 12 0 49 2 03 3 03 3 54 4 40 6 07 6 49 9 22 8 16 9 02 59 53 10 55 0 06 1 13 2 09 3 44 4 26 6 30 7 13 7 59 8 49 9 49	H. M. 22 13 28 45 12 35 13 45 15 34 16 16 16 16 16 56 17 35 18 14 18 54 19 36 20 19 21 04 21 54 22 55 12 03 13 09 14 03 14 48 15 26 16 02 16 02 16 17 17 13 17 51 18 32 19 17 20 07 21 02 03	H. M. 4 15 5 28 6 49 8 03 8 59 9 44 10 25 11 03 11 40 0 27 1 08 1 14 10 5 09 6 14 7 17 8 11 8 52 9 30 10 07 10 43 11 18 0 06 0 14 11 18 0 06 0 12 17 3 11 4 09	H. M. 15 59 17 12 18 49 20 11 21 17 22 11 23 00 23 45 14 11 14 52 16 39 16 44 18 05 19 22 20 27 21 21 22 07 22 48 23 27 11 54 12 32 13 14 14 00 14 53 15 55	•

The Time used is Eastern Standard, for the 75th Meridian, as in the other St. Lawrence tables.

Upper Traverse.—To find the turn of the current in the Upper Traverse, subtract 22 minutes at High Water and subtract 5 minutes at Low Water from the time given in the above tables.

Effect of the Moon's Declination.—When the Moon is in high declination, north or south of the equator, a few days occur when the turn of the current at Low Water may be 15 minutes earlier or later than given in the tables. At High Water, this variation is scarcely appreciable.

			API	RIL.					l	MA	ΔΥ.	•	-
		Нісн У	WATER.	Low V	VATER.				Нісн	WATER.	Low W	ATER.	
Date.	Day.	Time. H't.	Time. H't.	Time. H't.	Time. H	t.	Date.	Day.	Time. H't.	Time. H't.	Time. H't.	Time. H'	t.
1	M.	н. м. гт. 1:38 12.7	н. м. гт. 13:57 13 ²	н. м. гт. 7:42 1·1		T	1	w.	н. м. гт. 1:45 14 [*] 0	н. м. гт. 14:16 12:2	н. м. гт. 8:09 1.3		т.
2	Tu.	2:16 13.5	14:40 13:2	8:24 0:7	20:37 1	•4	2	Th.	2:21 14:4	14:55 11.9	8:50 1.4	20:41 2	ě
3	w.	2:52 14.0	15:21 12:8	9:05 0:6	21:08 1	L·7	3	F.	2:57 14:4	15:33 11:4	9:27 1.8	21:14 2	8.8
4	Th.	3:27 14.1	16:00 12:1	9:45 1.0	21:40 2	2.2	4	Sa.	3:34 14.1	16:12 10:8	10:06 2:4	21:49 3	3.4
5	F.	4:03 13.8	16:38 11:2	10:26 1.7	22:14 2	8.8	5	\$.	4:13 13:6	16:52 10:1	10:46 3.1	22:27 4	1.0
6	Sa.	4:41 13.2	17:17 10:2	11:09 2:7	22:51 8	3.6	6	MI.	4:54 12.8	17:36 0.5	11:30 3.9	23:08 4	1.8
7	\$.	5:22 12:4	18:00 9:3	11:57 3:7	23:31 4	1.2	7	Tu.	5:39 11:9	18:32 8:8	12:23 4.6	23:55 5	5.2
8	IVE.	6:07 11:5	18:56 8:5		12:56	1.7	8	w.	6:32 11:0	19:45 8:6		13:31 5	5.1
9	Tu.	7:05 10:7	20:14 8:0	0:18 5:3	14:13	5.3	9	Th.	7:41 10:4	21:02 8:7	1:02 6:0	14:52 5	5.5
10	w.	8:23 10:1	21:50 8.1	1:29 5:9	15:57	5:3	10	F.	8:57 10:0	22:06 9:2	2:26 6:1	15:56 5	5.0
11	Th.	9:46 9:9	23:03 8:7	3:14 6:1	17:00	1.9	11	Sa.	10:02 10:1	22:54 9:9	3:44 5.8	16:42 4	1.7
12	F.	10:58 10:3	23:43 9:4	4:37 5:6	17:45	1.4	12	\$.	10:57 10:	23:34 10.9	4:50 51	17:21 4	1.2
13	Sa.	11:46 10 8		5:28 4.8	18:18	3.8	13	MI.	11:44 10:5		5:40 4.2	17:57 3	3.7
14	\$.	0:21 10:3	12:27 11:3	6:10 3:9	18:48	3.3	14	Tu.	0:12 11:5	12:27 11:3	6:24 3:4	18:31 3	3.2
15	M.	0:52 11:2	13:04 11:8	6:50 3.1	19:17	2.8	15	w.	0:49 12:9	13:09 11:6	7:05 2.6	19:04 2	2.7
16	Tu.	1:22 12:2	13:39 12:2	7:29 2:3	19:45	2.3	16	Th.	1:25 13:9	13:50 11:9	7:45 2:0	19:38 2	2.4
17	w.	1:53 13.1	14:13 12:4	8:07 1.7	20:13	2.0	17	F.	2:01 14	14:32 11:9	8:26 1.5	20:15 2	2.2
18	Th.	2:25 13:8	14:48 12:4	8:45 1:3	20:43	1.9	18	Sa.	2:39 15:	15:15 11:7	9:09 1:4	20:57 2	2.3
19	F.	3:00 14:3	15:25 12:1	9:24 1:2	21:17	2.0	19	\$.	3:21 15:	16:00 11:4	9:55 1.6	21:43 2	2.7
20	Sa.	3:38 14:5	16:06 11:3	10:05 1:5	21:57	2.4	20	IVII.	4:08 15	16:49 10:9	10:48 2:1	22:33 - 3	3.2
21	\$.	4:19 14:3	16:54 10:7	10:52 2:1	22:41	3.0	21	Tu.	5:00 14:	3 17:46 10:4	11:45 2:7	23:30 3	3.8
22	Mr.	5:09 13:7	17:51 9:9	11:48 2:9	23:29	3.8	22	w.	5:58 13	18:52 10:0		12:48 3	3.2
23	Tu.	6:10 12:9	19:01 9:	2	12:52	3.6	23	Th.	7:04 12	20:04 10:1	0:36 4.4	13:54 3	3· 6
24	w.	7:18 12:2	20:22 9:	0:35 4.8	14:17	4.0	24	F.	8:16 11	21:12 10:3	1:56 4:7	15:01 3	3· 8
25	Th.	8:34 11:6	21:40 9:5	2:00 4:9	15:42	3.9	25	Sa.	9:27 11	22:13 11:1	3:18 4:5	16:05 3	3.8
26	F.	9:54 11:5	22:48 10	3:36 4.7	16:47	3.2	26	\$.	10:33 11	23:08 11:9	4:36 4:0	16:58 3	3.7
27	Sa.	11:08 11:7	23:44 11:4	4:50 3:	17:39	3.1	27	MI.	11:32 11	23:57 12:8	5:32 3.4	17:40 3	3.6
28	5 .		12:03 11:9	5:49 3.0	18:23	2.7	28	Tu.		12:25 11:	6:22 2.9	18:20	3.4
29	IME.	0:29 12:4	12:51 12:5	6:40 2:2	19:01	2.5	29	w.	0:41 13	13:14 11:	7:09 2:5	18:59	3.3
30	Tu.	1:08 13 3	13:35 12:	7:26 1:6	19:36	2.4	30	Th.	1:22 14	0 13:57 11	7:53 2:3	19:37	3.3
							31	F.	2:01 14	3 14:38 11	8.34 2.3	20:14	3.3
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The TIME used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides.

TIDAL DIFFERENCES for the St. Lawrence estuary and Chaleur bay are given on page 6, and for the turn of the TIDAL STREAMS on the St. Lawrence, on page 8.

1 Sa. 2:39 14*4 15:18 10*9 9:13 2*5 20:51 3*5 1 M. 3:03 13*9 15:37 10*7 9:38 2*9 21:14 2 5. 3:17 14*2 15:57 10*7 9:51 2*9 21:29 3*8 2 Tu. 3:42 13*6 16:16 10*6 10*14 3*0 21:53 3 M. 3:56 13*7 16:37 10*3 10:30 3*3 22:08 4*2 3 W. 4:20 13*1 16:56 10*5 10:50 3*2 22:33 4 Tu. 4:36 13*0 17:19 9*9 11:11 3*8 22:49 4*7 4 Th. 4:58 12*6 17:37 10*4 11:27 3*5 23:16 5 W. 5:18 12*2 18:06 9*5 11:56 4*2 23:35 5*2 5 F. 5:37 11*9 18:19 10*3 12:05 6 Th. 6:06 11*5 19:01 9*3 12:46 4*6 6 Sa. 6:18 11*2 19:04 10*3 0:02 4*7 12:45 7 F. 7:00 10*8 20:00 9*5 0:30 5*6 13:40 4*8 7 \$. 7:06 10*6 19:53 10*5 0:53 4*9 13:28 8 Sa. 7:59 10*3 20:58 9*8 1:36 5*7 14:36 4*8 8 M. 8:02 10*1 20:45 11*0 1:54 5*1 14:15 9 \$. 9:00 10*1 21:50 10*5 2:48 5*6 15:29 4*6 9 Tu. 9:04 9*7 21:40 11*6 3:04 5*0 15:07 10 M. 10:00 10*1 22:38 11*3 3:59 5*2 16:18 4*4 10 W. 10:08 9*6 22:38 12*3 4:16 4*7 16:04 11 Tu. 10:56 10*3 23:24 12*3 5:02 4*5 17:04 4*0 11 Th. 11:13 9*7 23:37 13*2 5:27 4*1 17:03 12 W. 11:48 10*5 5:53 3*8 17:48 3*7 12 F 12:14 10*1 6:30 3*4 18:01 13 Th. 0:09 13*3 12:38 10*9 6:41 3*0 18:31 3*2 13 Sa. 0:35 14*2 13:10 10*7 7:19 2*6 18:56 14 F. 0:54 14*3 13:27 11*2 7:28 2*3 19:13 2*8 14 \$. 1:29 14*9 14:03 11*3 8:05 1*8 19:48 15 Sa. 1:39 15*1 14:15 11*5 8:14 18 19:56 2*5 15 M. 2:19 15*5 14:54 11*7 8:50 1*3 20:38 16 \$. 2:25 15*6 15:04 11*6 9:01 15 20:42 2*4 16 Tu. 3:07 15*6 15:42 12*1 9:35 1*1 21:27 17 M. 3:13 15*7 15:54 11*5 9:49 15 21:31 2*5 17 W. 3:54 15*2 16:29 12*2 10:21 1*2 22:17 18 Tu. 4:03 15*3 16:45 11*4 10:38 1*7 22:23 2*8 18 Th. 4:41 14*5 17:15 12*2 11:07 1*6 23:09	==					****										****	77		74.	
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25 Tu. 11:08 9·9 23:26 12·4 5:12 4·0 17:06 4·3 25 Th. 11:48 8·9 23:57 12·2 6:01 4·3 17:19 26 W 12:04 9·9 6:12 3·7 17:52 4·3 26 F 12:46 9·2 7:00 4·0 18:13 27 Th. 0:14 12·9 12:54 10·0 7:02 3·4 18:36 4·1 27 Sa. 0:48 12·6 13:33 9·7 7·42 3·6 19:01 28 F. 0:59 13·4 13:37 10·2 7·45 3·2 19:17 3·9 28 5. 1:34 13·0 14:12 10·2 8:18 3·2 19:44 29 Sa. 1:42 13·7 14:18 10·4 8:25 3·0 19:57 3·8 29 M. 2:15 13·3 14:48 10·6 8:50 2·9 20:24	23	5.	8:58	10.7	21:34	11.5	2:52	4.3	15:15	4.0	23	Tu.	9:28							4.8
26 W	24	M.	10:06	10.2	22:33	11.9	4:05	4.2												5.0
27 Th. 0:14 12-9 12:54 10·0 7:02 3·4 18:36 4·1 27 Sa. 0:48 12·6 13:33 9·7 7:42 3·6 19:01 28 F. 0:59 13·4 13:37 10·2 7:45 3·2 19:17 3·9 28 5. 1:34 13·0 14:12 10·2 8:18 3·2 19:44 29 Sa. 1:42 13·7 14:18 10·4 8:25 3·0 19:57 3·8 29 M. 2:15 13·3 14:48 10·6 8:50 2·9 20:24	25	Tu.	11:08	9.9	23:26	12.4	5:12	4.0	17:06		25		11:48	8.9						
28 F. 0:59 13:4 13:37 10·2 7:45 3·2 19:17 3·9 28 5. 1:34 13·0 14:12 10·2 8:18 3·2 19:44 29 Sa. 1:42 13·7 14:18 10·4 8:25 3·0 19:57 3·8 29 M. 2:15 13·3 14:48 10·6 8:50 2·9 20:24	26	w.			12:04	9.9	6:12	3.7	17:52	4.3	26	F.								
29 Sa. 1:42 13·7 14:18 10·4 8:25 3·0 19:57 3·8 29 M. 2:15 13·3 14:48 10·6 8:50 2·9 20:24	27	Th.	1				1								İ					
	28	F.			1															
30 \$. 2:23 13:9 14:58 10:6 9:03 2:9 20:36 3:6 30 Tu. 2:52 13:5 15:22 10:9 9:19 2:7 21:02	29	Sa.																		
	30	\$.	2:23	13.9	14:58	10.6	9:03	2.9	20:36	3.6										
31 W. 3:27 13·4 15:55 11·2 9:47 2·6 21:39											31	w.	3:27	13.4	15:55	11.2	9:47	2.6	21:39	3.0

The Time used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides.

Tidal Differences for the St. Lawrence estuary and Chaleur bay are given on page 6, and for the turn of the Tidal Streams on the St. Lawrence, on page 8.

								[]									
			AUGI	JST.								SEI	PTE	MBER	b.		
		Нідн '	WATER.	Lo	ow V	VATER.				H	IGW Y	WATER		L	ow I	VATER	
Date.	Day.	Time. H't.	Time. H't	Time.	H't.	Time.	H't.	Date	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
1	Th.	н. м. гт. 4:01 13·1	н. м. гт 16:27 11:3	1	ът. 2.6		FT. 3·1	1	\$.	н. м.	i	н. м. 16:52			3	н. м. 23:01	гт. 2·8
2	F.		16:59 11:		2.8	22:51	3.3	2	MI.	5:10	11.3	17:32	12.2	11:09	2.9	23:45	3.4
3	Sa.		17:32 11:		3.0	23:30	3.6	3	Tu.	5:49	10 .5	18:19	12.0	11:43	3.1		
4	5.		18:09 11:	l	3.4			4	w.	6:39	9.6	19:17	11.8	0:39	4.1	12:31	4.0
5	IVII.		18:52 11:		4.0	12:26	3.8	5	Th.	7:48	8.8	20:26	11.7	1:56	4.6	13:37	4.5
6	Tu.	7:08 9:9	19:45 11.4	1:06	4.5	13:06	4.1	6	F.	9:17	8.6	21:44	11.8	3:33	4.7	15:04	4.7
7	w.	8:09 9:2	20:49 11:	2:12	4.8	13:49	4.4	7	Sa,	10:41	9.0	22:59	12.4	4:54	4.1	16:26	4.3
8	Th.	9:22 8.9	22:02 12:	3:28	4.7	15:06	4.5	8	5.	11:50	9.9			6:02	3.3	17:40	3.5
9	F.	10:56 9.1	23:14 12:	5:02	4.2	16:32	4.2	9	IVII.	0:08	13.2	12:46	11.0	6:52	2.4	18:40	2.4
10	Sa.		12:04 9	6:12	3.4	17:40	3.6	10	Tu.	1:05	13.8	13:31	12.1	7:34	1.7	19:31	1.4
11	\$.	0:17 13.7	13:00 10:	7:06	2.5	18:44	2.7	11	w.	1:49	14:3	14:12	13.0	8:12	1.1	20:18	0.7
12	W.	1:14 14:5	13:50 11	7:53	1.7	19:39	1.9	12	Th.	2:31	14.4	14:52	13.7	8:49	0.9	21:03	0.5
13	Tu.	2:06 15:0	14:37 12:	8:35	1.1	20:29	1.3	13	F.	3:12	14.0	15:32	13.9	9:25	1:1	21:47	0.6
14	w.	2:53 15.1	15:22 12	9:15	0.8	21:17	0.9	14	Sa.	3:54	13.4	16:13	13.8	10:00	1.5	22:31	1.2
15	Th.	3:38 14.8	16:06 13	9:54	0.9	22:04	1.0	15	5.	4:38	12.3	16:55	13.4	10:35	2.2	23:16	2.2
16	F.	4:22 14:1	16:49 13·	1 10:34	1.4	22:51	1.5	16	M.	5:25	11.2	17:39	12.7	11:11	3.1		
17	Sa.	5:06 13:0	17:33 12:	8 11:14	2.1	23:40	2.4	17	Tu.	6:16	9:9	18:28	11.9	0:04	3.3	11:50	4.0
18	5.	5:51 11:7	18:18 12	3 11:55	2.9			18	w.	7:14	8:9	19:27	11.0	1:03	4.4	12:37	4.9
19	M.	6:40 10:5	19:07 11	7 0:34	3.3	12:38	3.8	19	Th.	8:21	8.2	20:38	10.5	2:25	5.2	13:46	5.7
20	Tu.	7:38 9:3	20:08 11	2 1:40	4.2	13:27	4.6	20	F.	9:47	8.1	22:04	10.4	4:19	5.3	15:17	5.9
21	w.	8:50 8:5	21:20 10	9 3:08	4.9	14:28	5.3	21	Sa.	11:16	8.5	23:24	10.7	5:30	4.9	16:46	5.6
22	Th.	10:17 8:2	22:36 11	0 4:37	5.0	15:46	5.6	22	5.			12:17	9.2	6:20	4.4	17:51	4.9
23	F.	11:40 8:5	23:46 11	3 5:53	4.7	17:06	5'4	23	MI.	0:20	11.2	12:51	10.0	6:54	3.9	18:34	4.1
24	Sa.		12:38 9	6:50	4.2	18:08	4.9	24	Tu.	0:59	11.7	13:19	10.7	7:23	3.4	19:11	3.3
25	5.	0:39 11.8	13:20 9	7:25	3.7	18:56	4.2	25	w.	1:32	12.2	13:48	11.5	7:49	2.9	19:45	2.7
26	MI.	1:22 12:4	13:54 10	4 7:54	3.2	19:35	3.6	26	Th.	2:02	12.5	14:18	12.2	8:13	2.5	20:17	2.1
27	Tu.	1:59 12.8	14:23 11	0 8:22	2.8	20:09	2.9	27	F.	2:31	12.7	14:47	12.8	8:36	2.2	20:49	1.8
28	W.	2:33 13:0	14:51 11	5 8:49	2.5	20:41	2.5	28	Sa.	3:01	12.6	15:16	13.2	9:00	2.1	21:23	1.7
29	Th.	3:05 13.1	15:19 11	9:15	2:3	21:13	2.2	29	§.	3:33	12.3	15:46	13.4	9:28	2.2	22:00	1.9
30	F.	3:36 12:9	15:48 12	2 9:42	2.2	21:46	2.2	30	MI.	4:08	11.8	16:19	13.4	10:00	2.4	22:41	2.4
31	Sa.	4:06 12:0	16:18 12	3 10:10	2:3	22:22	2.4										
]	J				1		11		1		1		1			

The Γ_{IME} used is Eastern Standard, for the 75th Meridian, which is five hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The HEIGHT is measured from the level of Low Water at ordinary Spring Tides.

Tidal Differences for the St. Lawrence estuary and Chaleur bay are given on page 6, and for the turn of the Tidal Streams on the St. Lawrence, on page 8.

-) [===						
						BER.								NO	VE	MBER	, ,		
		HI	GH \	WATER		L	ow V	VATER.				Н	GH V	VATER.		L	ow V	VATER.	
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
		н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.
1	Tu.					10:36	2.9	23:28	3.1	1	F.	6:21	9.6	18:38	12.4	0:18	3.5	12:02	4.2
2	w.		10.2	17:49	12.7	11:17	3.2			2	Sa.	7:37	9.2	19:53	11.7	1:31	4.0	13:15	4.7
3	Th.	6:29	9.4	18:51	12.1	0:26	3.8	12:10	4.1	3	5.	9:00	9.5	21:14	11.4	2:52	4.0	14:52	4.7
4	F.	7:44	8.8	20:10	11.7	1:42	4.3	13:26	4.7	4	IVE.	10:10	10.2	22:28	11.2	4:06	3.7	16:14	4.0
5	Sa.	9:12	8.8	21:32	11.7	3:10	4'4	14:52	4.8	5	Tu.	11:10	11.2	23:28	11.8	5:02	3.3	17:20	3.2
6	\$.	10:34	9.5	22:50	12.0	4:32	4.0	16:26	4.2	6	w.	11:59	12.3			5:47	3.0	18:14	2.4
7	IVE.	11:38	10.5	23:52	12.5	5:36	3.2	17:33	3.5	7	Th.	0:19	12.0	12:41	13.2	6:28	2.7	19:03	1.7
8	Tu.			12:26	11.7	6:26	2.5	18:30	2.2	8	F.	1:05	12.1	13:21	14.0	7:06	2.5	19:48	13
9	W.	0:46	13.0	13:09	12.8	7:07	5.0	19:19	1.3	9	Sa.	1:49	12.1	14:00	14.5	7:43	2.4	20:30	1.3
10	Th.	1:32	13.4	13:49	13.8	7:44	1.7	20:04	0.7	10	5.	2:32	11.9	14:39	14.7	8:20	2:5	21:11	1.5
11	F.	2:14	13.3	14:28	14.4	8:19	1.5	20:47	0.6	11	M.	3:14	11.5	15:19	14.4	8:57	2.7	21:52	2.0
12	Sa.	2:54	13.0	15:06	14.5	8:53	1.7	21:29	0.8	12	Tu.	3:57	11.0	16:01	13.8	9:35	3.2	22:35	2.8
13	\$.	3:33	12.5	15:44	14.4	9:26	2.1	22:10	1.2	13	W .	4:41	10.4	16:44	13.1	10:14	3.8	23:22	3.5
14	M.	4:13	11.6	16:23	13.8	10:00	2.7	22:52	2.4	14	Th.	5:27	9.8	17:29	12.1	10:55	4.4		
15	Tu.	4:56	10.7	17:04	12.9	10:36	3.2	23:36	3.5	15	F.	6:18	9.2	18:19	11.2	0:13	4.2	11:42	5.1
16	w.	5:43	9.7	17:50	12.0	11:16	4.3			16	Sa.	7:20	8.9	19:20	10.5	1:12	4.8	12:47	5.7
17	Th.	6:39	8.9	18:46	11.1	0:32	4:4	12:06	5.2	17	5.	8:28	8.9	20:31	10.1	2:17	5.0	14:03	5:9
18	F.	7:54	8.4	20:04	10.3	1:49	5:1	13:11	5.9	18	Mr.	9:34	9.2	21:38	9.9	3:20	5.0	15:25	5.7
19	Sa.	9:24	8.4	21:27	10.1	3:32	5.3	14:50	6.0	19	Tu.	10:28	9.9	22:34	10.1	4:14	4.8	16:30	5.1
20	\$.	10:41	8.8	22:40	10.2	4:45	5.0	16:22	5.7	20	w.	11:13	10.6	23:24	10.3	4:55	4.4	17:24	4.4
21	M.	11:30	9.6	23:34	10.7	5:29	4.6	17:16	5.0	21	Th.	11:51	11.5			5:33	4.0	18:10	3.8
22	Tu.			12:06	10.4	6:03	4.1	18:01	4.2	22	F .	0:09	10.7	12:27	12.4	6:10	3.6	18:51	3.0
23	w.	0:13	11.0	12:38	11.2	6:32	3.7	18:42	3-1	23	Sa.	0:51	11.0	13:02	13.3	6:46	3.2	19:30	2.4
24	Th.	0:49	11.5	13:09	12.1	7:00	3.2	19:1 9	2.7	24	\$.	1:32	11.3	13:38	14.1	7:21	2.8	20:09	1.9
25	F.	1:24	11.8	13:40	12.9	7:27	2.8	19:54	2.2	25	MT.	2.13	11.4	14:16	14.7	7:57	2.6	20:49	1.7
26	Sa.	1:59	12.1	14.12	13.6	7:55	2.5	20:29	1.8	26	Tu.	2:55	11.4	14:57	14.9	8:35	2.5	21:32	1.7
27	\$.	2:35	12.1	14:45	14.1	8:24	23	21:05	1.6	27	w.	3:38	11.3	15:42	14.8	9:17	2.6	22:20	1.9
28	M.	3:12	11:9	15:20	14.4	8:55	2.4	21:44	1.8	28	Th.	4:24	10.9	16:32	14.3	10:03	2:9	23:14	2.4
29	Tu.	3:50	11.5	15:58	14.3	9:30	2.6	22:27	2.2	29	F.	5:14	10.5	17:27	13.5	10:56	3.3	, , , , , ,	
30	w.	4:30	10.9	16:42	13.9	10:10	3.0	23:17	2.8	30	Sa.	6:14	10.2	18:28	12.6	0:12	2.9	11:58	3.9
31	Th.	5:17	10.1	17:34	13.2	11:00	3.6												
		NE mad		-						1									

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Tidal Differences for the St. Lawrence estuary and Chalcur bay are given on page 6, and for the turn of the Tidal Streams on the St. Lawrence, on page 8.

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=			we		[A N	UARY	 V							FEI	BRU	ARY			
		Hic	gh V	VATER				ATER.		a [*]		Hi	GH V	VATER.		Lo	w V	VATER.	
Date.	Day.	Time.	H't.[Time.	H't.	Time.	 H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
		н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.
1	NI.	4:30	į.	17:13	5.6		1.1	23:29	1.8	1	Th.	6:15	6.4	19:00	5:9	0:06	1.7	12:51	0.4
2	Tu.	5:29	6.5	18:12	5.8			12:20	0.8	2	F.	7:14	6.6	19:51	6.2	1:05	1.4	13:44	0.1
3	w.	6:27	6.7	19:09	6.1	0:25	1.7	13:13	0.2	3	Sa.	8:04	6.7	20:39	6.4	2:02	1.2	14:35	0.0
4	Th.	7:21	6.9	20:04	6.3	1:20	1.6	14:04	0.2	4	5.	8:52	6.7	21:26	6.2	2:58	1.0	15:25	0.0
5	F.	8:13	6.9	20:57	6.4	2:14	1.5	14:54	0.1	5	. IM.	9:32	6.6	22:12	6.4	3:53	1.0	16:14	0.5
6	sa.	9:03	6.8	21:47	6.4	3:09	1.4	15:44	0.1	6	Tu.	10:26	6:3	22:57	6.3	4:47	1.1	17:03	0.6
7	\$.	9:53	6.6	22:37	6.3	4:05	1.4	1.6:35	0.3	7	W.	11:14	6.0	23:43	6.1	5:40	1.2	17:53	1.1
8	M.	10:45	6.3	23:28	6.2	5:03	1.5	17:27	0.6	8	Th.			12:04	5.7	6:33	1.5	18:44	1.6
9	Tu.	11:39	6.0			6:04	1.6	18:20	1.0	9	F.	0:30	5.8	12:57	5.3	7:27	1.7	19:37	2.0
10	w.	0:20	6.1	12:36	5.7	7:07	1.7	19:16	1.4	-10	Sa.	1:20	5.6	13:55	5.0	8:23	1.9	20:34	2.4
11	Th.	1:13	5.9	13:35	5.4	8:07	1.8	20:13	1.8	11	5.	2:16	5.4	15:00	4.8	9:20	2.0	21:35	2.6
12	F.	2:08	5.8	14:36	5.1	9:05	1.9	21:10	2.1	12	M.	3:17	5.2	16:14	4.7	10:16	2.0	22:35	2.7
13	Sa.	3:04	5.6	15:39	5.0	9:59	1.9	22:06	2.4	13	Tu,	4:21	5.2	17:20	4.8	11:09	1.8	23:32	2.7
14	5.	4:00	5.6	16:43	5.0	10:51	1.9	23:00	2.6	14	W.	5:22	5.2	18:16	4.9			12:00	1.6
15	M.	4:55	5.6	17:42	5.0	11:40	1.8	23:50	2.6	15	Th.	6:17	5.4	19:02	5.1	0:20	2.5	12:45	1'4
16	Tu.	5:47	5.6	18:34	5.1			12:26	1.6	16	F.	7:00	5.6	19:41	5.3	1:01	2.3	13:23	1.2
17	w.	6:34	5.7	19:20	5:3	0:34	2.6	13:09	1.2	17	Sa.	7:39	5.7	20:15	5.4	1:37	2.1	13:58	1.1
18	Th.	7:16	5.8	20:01	5.4	1:15	2.5	13:49	1.3	18	5.	8:15	5.8	20:47	5.5	2:09	1.9	14:31	1.0
19	Æ.	7:55	5.9	20:39	5.4	1:54	2*4	14:26	1.2	19	M.	8:49	5.9	21:18	5.6	2:40	1.7	15:03	1.0
20	Sa.	8:32	5.9	21:14	5.5	2:29	2.8	15:01	.12	20	Tu.	9:22	5.9	21:47	5.7	3:12	1.6	15:34	1.1
21	5.	9:09	5.9	21:47	5.5	3:03	2.2	15:34	1.2	21	w.	9:55	5.8	22:17	5.8	3:46	1.6	16:06	1.2
22	M.	9:45	5.8	22:19	5.6	3:38	2.2	16:06	1.3	22	Th.	10:31	5.7	22:51	5.8	4:25	1.6	16:41	1.4
23	Tu.	10:22	5.8	22:52	5.6	4:14	2.2	16:38	1.4	23	F.	11:13	5.6	23:30	5.8	5:11	1.6	17:23	1.7
24	W.	11:00	5.7	23:28	5.7	4:56	2.2	17:12	1.5	24	Sa.			12:03	5.4	6:04	1.7	18:12	1.9
25	Th.	11:41	5.6		,	5:44	2.1	17:51	1.7	25	\$.	0:18	5.8	12:59	5.2	7:10	1.7	19:12	2.1
26	Æ.	0:09	5.7	12:28	5.4	6:37	2.1	18:40	1.9	26	IVI.	1:17	5.7	14:04	5.0	8:22	1.6	20:28	2.2
27	Sa.	0:57	5.8	13:20	5.5	7:40	\$2.0	19:39	2.0	27	Tu.	2:26	5.6	15:19	5.0	9:36	1.4	21:49	2.2
28	\$.	1:50	5.9	14:22	5.2	8:48	3 1.8	20:47	2.1	28	w.	3:40	5.7	16:37	5'1	10:42	1.1	23:02	1.9
29	IVII.	2:51	-5.9	15:34	5.2	9:55	13	21:57	2.1	29	Th.	4:51	5.8	17:43	5.4	11:40	0.7		
30	Tu.	4:00	6.0	16:50	5.5	10:58	3 1:	23:04	2.0										
31	W.	5:10	6.2	17:59	5.6	11:56	3 0.8	3											
_	1]		1		ļ	,	11						I			

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides; that is, from the same Datum to which the soundings are referred, on the Admiralty chart of Halifax harbour.

The DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 23'4 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Halifax are given on page 10.

	-		-		MA	RCH.			-=	===				,	API	RIL			
		Н	IGH 7	WATER			ow V	VATER.				H	IGH	WATER			ow V	VATER.	
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	II't.	Time.	— — Н't.	Time.	H't.
1	F.	н. м.		н. м. 18:39	FT. 5.8			н. м.	FT. 0.4	11	M.	н. м. 7:30		н. м. 19:52	FТ. 6·3	н. м.		н. м.	FT. 0.4
2	Sa.	6:52	6.3	19:30	6.2	0:59	1.1	13:25	0.1	2	Tu.	8:15	6.2	20:32	6.4	2:18	0.4	14:30	.0.6
3	5.	7:45	6.5	20:17	6.4	1:51	0.8	14:13	0.0	3	w.	8:58	6.2	21:11	6.3	3:01	0.4	15:10	0.8
4	DI.	8:34	6.5	21:02	6.5	2:40	0.6	15:00	0.2	4	Th.	9:40	6.0	21:49	6.1	3:43	0.6	15:49	1.2
5	Tu.	9:20	6.4	21:44	6.4	3:28	0.6	15:45	0.4	5	Œ'∗	10:21	5.7	22:29	5.8	4:25	0.8	16:29	1.6
6	w.	10:04	6.2	22:25	6.2	4:15	0.7	16:29	0.8	6	Sai	11:04	5.4	23:12	5.5	5.09	1.1	17:14	2.1
7	Th.	10:48	5.9	23:06	6:0	5:02	0.9	17:14	1:3	7	5.	11:51	5.1			5:57	1.4	18:09	2:5
8	F.	11:33	5.5	23:49	5.6	5:50	1.2	18:03	1.8	8	IVM .	0:00	5.2	12:43	4.8	6:53	1.7	19:18	2.7
9	Sa.			12:20	5.2	6:41	1.5	18:56	2.3	9	Tu.	0:55	4.9	13:42	4.6	7:54	1.9	20:34	2.7
10	5.	0:36	5:3	13:14	4.9	7:38	1.8	19:58	2.6	10	w.	1:59	4.6	14:49	4.6	8:57	1.9	21:38	2.6
11	WE.	1:32	5.0	14:18	4.6	8:39	1.9	21:03	2.7	11	Th.	3:12	4.6	16:02	4.6	9:56	1.8	22:32	2.4
12	Tu.	2:37	4*9	15:38	4.5	9:40	1.9	22:06	2.7	12	F.	4:17	4.7	16:59	4.8	10:47	1.6	23:16	2.1
13	w.	3:50	4.8	16:51	4.6	10:38	1.8	23:04	2.5	13	Sa.	5:08	4.9	17:46	5.1	11:29	1.4	23:55	1.7
14	Th.	4:57	4.9	17:44	4.8	11:28	1.6	23:51	2.2	14	5.	5:55	5.2	18:24	5.4			12:06	1.2
15	F.	5:49	5.1	18:27	5.0			12:10	1.4	15	M.	6:38	5.4	18:58	5.6	0:32	1.3	12:42	1.1
16	Sa'	6:34	5.3	19:04	5.2	0:32	2.0	12:49	1.2	16	Tu.	7:18	5.6	19:31	5.9	1:08	1.0	13:17	1.0
17	5.	7:13	5.6	19:37	5.5	1:09	1.7	13:25	1.0	17	w.	7:56	5.8	20:04	6.1	1:45	0.8	13:53	1.0
18	IME.	7:49	5.7	20:09	5.7	1:44	1.4	13:58	0.9	18	Th.	8:33	5.9	20:39	6.2	2:25	0.6	14:30	1.1
19	Tu.	8:24	5.8	20:40	5.8	2:18	1.2	14:30	0.9	19	F.	9:11	5.9	21:17	6.2	3:07	0.6	15:09	1.3
20	w.	8:58	5.8	21:12	6.0	2.51	1.0	15:02	1.0	20	Sa.	9:53	5.7	22:01	6.1	3:52	0.6	15:53	1.5
21	Th.	9:33	5.8	21:46	6.0	3:25	1.0	15:36	1.2	21	\$.	10:40	5.5	22:50	5.9	4:42		16:42	1.8
22	F.	10:11	5.7	22:24	6.0	4:04		16:13	1.4	22	VI.	11:34	5.3	23:46	5.6	5:39		17:46	2.1
23	Sa.	10:55	5.5		5.9	4:50		16:55	1.7	23	Tu.			12:38	5.1	6:48		19:13	2.2
24	5.	11:47	5.3	23:58	5.7	5:47		17:48	3.0	24	w.	0:49		13:48	5.0	7:58		20:38	2.1
25	WI.			12:46	5.1	6:56		19:01	2.2	25	Th.	2:03		15:00	51	9:04		21:45	
26	Tu.	1:01	ð°5		4.9		1.3		2.3	26	F.	3:17		16:10	5.3	10:04		22:44	1.5
27	w.	2:12	5.3		4.9			21:49	2.1	27	Sa.	4:27		17:09	5.6				1.1
28	Th.	3:29	5.3			10:26		22:58	1.7	28	5.	5:30	5.4		5.9			10.92	0-0
29	F.	4:45	5.4	17:28			0.7		1.2	29	MI.	6:23	5.6		6.1	0:25		12:36	
30	Sa.	5:49	5.7		5.8			12:16	0.5	30	Tu.	7:09	5.8	19:20	6.2	1:10	0.0	13:19	1.0
31	\$.	6:41	5.9	19:09	6.1	0:46	1 0.9	13:03	0.4										

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides; that is, from the same Datum to which the soundings are referred, on the Admiralty chart of Halifax harbour.

The Dry-Dock.—To find the depth of water on the sill of this dock at any tide, add 23.4 feet to the height of High Water as above given. The Tidal Differences referred to Halifax are given on page 10.

,					M	AY.									JU	NE.	-		2_
i		H	GH V	WATER			ow V	VATER.			* .	Н	IGH V	WATER			ow V	ZATER.	
Date.	Day.	Time.				Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	—- H't.	Time.	H't	Time.	H't.
1	W.	н. м.	гт. 5·9	н. м.	гт. 6·2	н. м.	FT.	н. м.	FT.	1	Sa.	H. M. 9:00	FT. 5.5	н. м. 20:57	FТ. 5°9	н. м. 2:45		н. м. 14:58	гт. 2·1
2	Th,	8:34	5.9	20:39	6.2	2:34	0.5	14:40	1.4	2	\$	9:39	5.4	21.36	5.7	3:24	0.9	15:37	2.3
3	F.	9:16	5.8	21:17	6.0	3:14	0.6	15:19	1.7	3	M.	10:19	5'3	22:16	5.5	4:03	1.0	16:17	2.4
4	Sa.	9:58	5.6	21:56	5.7	3:53	0.8	15:59	2.0	4	·Tu,	11:01	5.2	22:58	5.2	4:43	1.2	17:01	2.5
5	\$	10:41	5.3	22:36	5.4	4:33	1.1	16:41	2.3	5	W.	11:46	5.1	23:43	5.0	5:26	1.4	17:54	2.6
6	M.	11:26	5.1	23:20	5.1	5:15	1.3	17:28	2.6	6	Th,			12:33	5.0	6:14	1.6	18:57	2.6
7	T.			12:14	4.9	6:04	1.6	18:30	2.7	7	Æ.	0:33	4.9	13:21	5.0	7:05	1.7	20:00	2.5
8	W.	0:11	4.9	13:08	4.8	7:03	1.7	19:49	2.7	8	Sa.	1:28	4.8	14:10	5.1	7:59	1.8	20:56	2.2
9	Th,	1:14	4.7	14:09	4.7	8:06	1.8	20:58	2.6	9	5	2:24	4.8	15:00	5.3	8:52	1.8	21:47	2.0
10	₩.	2:19	4.6	15:09	4.8	9:05	1.7	21:49	2.3	10	M.	3:21	4.9	15:50	5.5	9:43	1.8	22:36	1.6
11	Sa.	3:22	4.7	16:03	5.0	9:53	1.7	22:34	2.0	11	Tu.	4:19	5.0	16:41	5.8	10:32	1.7	23:23	1.2
12	5.	4:20	4.8	16:50.	5.3	10:37	1.6	23:16	1.6	12	W.	5:16	5.2	17:31	6.1	11:21	1.6		
13	IVI.	5:12	5.1	17:33	5.6	11:19	1.5	23:57	1.2	13	Th.	6:11	5.4	18:20	6.3	0:09	0.8	12:11	1.5
14	Tu.	6:00	5.3	18:13	5.9	,		12:00	1.4	14	F.	-7:03	5.7	19:09	6.5	0:55	0.5	13:02	1.5
15	w.	6:44	5.6	18:53	6.2	0:38	0.9	12:41	1.3	15	Sa.	7:54	5.9	19:58	6.6	1:43	0.2	13:54	1.4
16	Th,	-7:27	5.8	19:34	6.4	1:20	0.6	13:23	1.3	16	\$	8:44	6.0	20:48	6.6	2:34	0.1	14:48	1.4
17	F.	8:10	5:9	20:16	6.5	2:03	0 4	14:06	1.3	17	IM.	9:35	6.0	21:39	6.4	3:28	0.1	15:45	1.5
18	Sa.	8:54	5.9	21:00	6.4	2:49	0.3	14:51	1.4	18	Tu.	10:27	6.0	22:31	6.1	4:24	0.2	16:48	1.6
19	\$	9:41	5.8	21:47	6.2	3:38	0.3	15:44	1.6	19	W.	11:21	5.9	23:26	5.8	5:21	0.4	17:58	1.7
20	IVIK.	10:32	5.7	22:38	6.0	4:32	0.5	16:48	1.9	20	Th.			12:15	5.8	6:19	0.6	19:06	1.7
21	Tu.	11:30	5.5	23:34	5'6	5:32	0.6	18:02	2.0	21	F.	0:25	5.2	13:10	5.7	7:17	0.9	20:08	1.6
22	w.			12:32	5.4	6:35	0.8	19:17	2.0	22	Sa.	1:28	5.2	14:06	5.6	8:14	1.2	21:06	1.5
23	Th.	10:38	5.4	13:36	5.4	7:39	1.0	20:28	1.9	23	\$	2:34	5.0	15:03	5.6	9:10	1.5	22;02	1.5
24	F.	1:47	5.1	14:41	5'4	8:40	1.1	21:32	1.7	24	M.	3:39	5.0	16:00	5.7	10:05	1.7	22:55	1.4
25	Sa.	3:00	5.0	15:44	5.5	9:38	1.2	22:29	1.4	25	Tu.	4:42	5.0	16:55	5.7	10:59	2.0	23:45	1.3
26	\$	4:08	5.1	16:41	5.7	10:32	1.3	23:19	1.2	26	w.	5:41	.5.0	17:46	5.7	11:50	2.1		
27	NE.	5:08	5.2	17:29	5.8	11:22	1.4			27	Th.	6:33	5.1	18:34	5.8	0:31	1.2	12:36	2.2
28	Tu,	6:03	5.3	18:14	5.9	0:06	1.0	12:09	1.5	28	æ.	7:18	5.3	19:17	5.8	1:13	1.0	13:18	2.2
29	W.	6:54	5:5	18:57	6.0	0:50	0.9	12:54	1.6	29	Sa.	8:00	5.3	19:57	5.8	1:53	1.0	13:57	2.2
30	Th.	7:40	5.6	19:38	6.0	1:30	0.8	13:37	1.8	30	\$.	8:40	5.4	20:36	5.8	2:31	0.9	14:34	2.2
31	F.	8:21	5.6	20:18	6.0	2:08	0.7	14:18	1.9										
											1					J			

The Time used is Atlantic Standard, for the 75th Meridian which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides; that is, from the same Datum to which the soundings are referred, on the Admiralty chart of Halifax harbour.

THE DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 23.4 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Halifax are given on page 10.

	1									W 14 Y										
					JUI	LY.						AUGUST.								
	100	Н	IGH 1	WATER	ł. 	L	w V	VATER.				Н	IGH '	WATER		Low V		ATER.		
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	
		н. м.		II. M.			ŧт.	н. м.				Н. М.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.	
, 1	IYH .	9:19	5.4	21:14	5.7	3:08	0.9	15:10	2.3	1	Th.	10:01	5.5	22:03	5.6	3:46	1.0	16:01	1:9	
2	Tu.	9:57	5:3	21:52	5'5	3:44	1.0	15:47	2:3	2	æ.	10:34	ე'გ 	22:39	5:5	4:16	1.2	16:36	1-()	
3	w.	10:35	5:3	22:31	5.4	4:19	1.1	16:26	2.3	3	Sa.	11:09	5.5	23:17	5.4	4:48	1.4	17:15	2.0	
;1	Th.	11:14	5'3	23:11	5.2	4:55	1.3	17:09	2.3	4	5.	11:46	5.6	23:58	5.2	5:24	1.6	18:03	2.0	
5	F.	11:54	5.3	23:54	5.1	5:34	1.4	18:00	2:3	5	MI.			12:27	5.6	6:08	1.8	19:04	1.9	
6	Sa.			12:35	5'3	6:17	1.6	19:00	2.3	6	Tu.	0:46	5.1	13:14	5.7	7:00	2.0	20:14	1.8	
7	\$.	0:42	5:0	13:18	5'4	7:05	1.8	20:02	2.1	7	w.	1:44	5.0	14:14	5.7	8:00	2.1	21:21	1.6	
8	IVI.	1:34	5.0	14:05	5.5	7:58	1.9	21:01	1.9	8	Th.	2:57	4.9	15:21	5.8	9:14	2.1	22:22	1.3	
9	Tu.	2:31	4.9	14:58	5.7	8:53	1.9	21:58	1.6	9	F.	4:13	5.0	16:30	5.9	10:26	2.0	23:20	0.9	
10	w.	3:34	5.0	15:57	5.9	9:50	1.9	22:53	1.3	10	Sa.	5:26	5.2	17:38	6.1	11:36	1.7			
11	Th.	4:44	5.1	17:00	6.1	10:49	1.9	23:47	0.9	11	5.	6:26	5.6	18:39	6.4	0:14	0.4	12:36	1.4	
12	æ.	5:50	5.3	17:59	6.3	11:49	1.7			12	· IVE .	7:20	6.0	19:35	6.6	1:07	0.1	13:33	1.1	
13	Sa.	6:49	5.6	18:54	6:5	0:40	0.5	12:48	1.5	13	Tu.	8:11	6:3	20:26	6.6	2:00	0.1	14:27	0.8	
14	5.	7:42	5.9	19:45	6.6	. 1:33	0.1	13:46	1.4	14	w.	9:00	6.4	21:14	6.6	2:52	-0.2	15:19	0.7	
15	MI.	8:32	6.1	20:34	6.6	2:25 -	-0.1	14:43	1.2	15	Thi	9:47	6.5	22:01	6.4	3:42	0.0	16:10	0.7	
16	Tu.	9:21	6.2	21:24	6.5	3:16 -	-0.2	15:40	1.2	16	F.	10:32	6.4	22:48	6.1	4:31	0.3	17:02	0.9	
17	w.	10:10	6.3	22:16	6.3	4:08 -	-0.1	16:38	1.2	17	Sa.	11:16	6.2	23:36	5.7	5:21	0.8	17:56	1.1	
18	Th.	11:00	6.2	23:10	6.0	5:01	0:2	17:37	1.2	18	5.			12:01	5.9	6:13	1.3	18:53	1.4	
19	F.	11:51	6.1			5:55	0.6	18:37	1.3	19	IVII.	0:26	5.3	12:49	5.6	7:08	1.8	19:53	1.6	
20	Sa.	0:06	5.7	12:44	5.9	6:50	1.0	19:36	1.5	20	Tu.	1:22	5.0	13:45	5.4	8:07	2.2	20:54	1.7	
21	\$.	1:05	5.3	13:37	5.7	7:46	1.4	20:34	1.6	21	w.	2:28	4.7	14:50	5.2	9:13	2.5	21:54	1.8	
22	Mr.	2:06	5.0	14:32	5.2	8:43	1.8	21:31	1.6	22	Th.	3:50	4.6	15:59	5.1	10:16	2.6	22:52	i-7	
23	Tu.	3:11	4.8	15:28	5.4	9:41	2.2	22:26	1.6	23	F.	5:01	4.7	17:03	5.1	11:14	2.6	23:44	1.5	
24	w.	4:18	4.7	16:25	5.4	10:38	2.4	23:18	1.5	24	Sa.	6:00	4.8	17:58	5.2			12:04	2.4	
25	Th.	5:21	4.8	17:21	5.4	11:32	2.5			25	5.	6:44	5.0	18:43	5.4	0:30	1.3	12:46	2.2	
26	F.	6:18	4.9		5.5			12:22	2.4	26	IVII.	7:20		19:21	5.6	1:08		13:24	2.0	
27	Sa.	7:07	5.1		5.6			13:07	2.3	27	Tu.	7:53	5.4	19:57	5.7			13:59	18	
28	\$.	7:48	5.2		5.7	1:34		13:47	2.2	28	w.	8:25	5.5	20:31	5.8	2:14	0.9	14:32	1.6	
29	IVIC.	8:24	5.3		5.7	2:12		14:23	2.1	29	Th.	8:56		21:04	5.8	2:45		15:04	1.5	
30	Tu.	8:57	5.4	20:55	5.7	2:46		14:56	2.0	30	IF a	9:26		21:37	5.7	3:15		15:35	1.5	
31	w.	9:29	5.4	21:29	5.7	3:17		15:28	1.9	31	Sa.	9:57	5.7	22:11	5.6	3:44		16:08	1.5	
	TDL TD-		!		_							-								

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides; that is, from the same Datum to which the soundings are referred, on the Admiralty chart of Halifax harbour.

THE DRY DOCK.--To find the depth of water on the sill of this dock at any tide, add 23.4 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Halifax, are given on page 10.

				SE	PTE	MBEI	₹.							00	CTO	BER.			
		Hi	ен У	VATER		LOW WATER.						H	IGH V	VATER.		LOW WATER.			
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time. 1	H't.	Time.	H't.	Time.	H't.
		н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.
1	5.	10:30	5.8	22:47	5'5	4:14	1.4	16:46	1.6	1	Tu.	10:40	5.9	23:11	5 4	4:22	1.8	17:09	1'4
2	WE.	11:07	5.8	23:29	5.3		1.6		1.6	2	w.	11:28				5:09	2.1	18:12	
3	Tu.	11:49	5.7			5:32	1.9		1.7	3	Th.	0;03		12:26	5.6		2.4	19:32	1.2
4	W.	0:19	51	12:39	5.7	6:26	2.1	19:38	1.7	4	F.	1:10	5.0	13:32	5.4	7:37	2.4	20:44	1.4
5	Th.	1:20	4.9	13:44	5.6	7:38	2.3	20:57	1.2	5	Sa.	2:26	5.0	14:45	5.4	9:06	2:3	21:48	1.2
6	₽.	2:32	4.8	14:58	5.6	9:04	2.3	22:09	1.3	6	5.	3:42	5.2	16:03	5.2	10:19	2.0	22:47	1.0
7	Sa,	3:53	5.0	16:13	5.7	10:21	2.0	23:07	0.9	7	IVII.	4:50	5.2	17:14	5.7	11:22	1.5	23:42	0.7
8	5.	5:07	5.3	17:21	5.9	11:28	1.6		• • • • •	8	Tu.	5:49	5.9	18:13	6.0			12:16	1.1
9	IVE.	6:10	5.7	18:22	6.2	0:01	0.2	12:27	1.2	9	w.	6:39	6.3	19:02	6.3	0:32	0.5	13:03	0.7
10	Tu.	7:03	6.1	19:16	6.4	0:53	0.2	13:20	0.8	10	Th.	7:24	6.2	19:48	6.4	1:17	0.5	13:49	0.5
11	w.	7:49	6.4	20:05	6.6	1:42	0.0	14:10	0.5	11	F.	8:06	6.7	20:31	6.4	2:00	0.6	14:34	0.4
12	Th.	8:32	6.6	20;52	6.5	2:29	0.1	14:58	0.4	12	Sa.	8:47	6.6	21:14	6.3	2:42	0.9	15.19	0.5
13	\mathbf{F}_{i}	9:14	6.6	21:38	6.4	3:15	0.3	15:45	0.5	13	5.	9:28	6.5	21:58	6.0	3:24	1.2	16:05	0.7
14	Sa.	9:56	6.5	22:23	6.1	4:00	0.7	16:32	0.7	14	IVIE.	10:10	6.2	22:44	5.7	4:09	1.6	16:53	1.1
15	\$.	10:39	6.2	23:09	5.7	4:45	1.2	17:20	1.0	15	Tu.	10:54	5.8	23:33	5.4	5:00	2.1	17:44	1.4
16	M.	11:24	5.9	23:58	5.3	5:33	1.7	18:14	1.4	16	w.	11:42	5.5			6:00	2.5	18:40	1.7
17	Tu.			12:14	5.5	6:30	2.2	19:16	1.6	17	Th.	0:25	5.1	12:35	5.1	7:08	2.7	19:40	1.9
18	w.	0:54	5.0	13:10	5.2	7:36	2.5	20:20	1.8	18	F.	1:22	4.9	13:36	4.9	8:19	2.8	20:42	1.9
19	Th.	1:59	4.7	14:12	5.0	8:45	2.7	21:19	1.9	19	Sa.	2:30	4.8	14:48	4.8	9:22	2.7	21:40	1.9
20	F.	3:15	4.6	15:20	4.8	9:51	2.7	22:15	1.8	20	5.	3:40	4.9	15:54	4.9	10:16	2.6	22:28	1.8
21	Sa.	4:28	4.7	16:33	4.9	10:50	2.6	23:07	17	21	IVII.	4:40	5.0	16:50	5.0	11:00	2.3	23:09	1.7
22	5.	5:30	4.9	17:36	5.1	11:40	2.3	23:55	1.5	22	Tu.	5:27	5.2	17:38	5.2	11:40	2.0	23:47	1.6
23	IVI.	6:15	5.1	18:21	5.3			12:21	2.0	23	w.	6:08	5.5	18:21	5.2			12:18	1.7
24	Tu.	6:52	5.3	18:58	5.2	0:36	1.3	12:57	1.8	24	Th.	6:43	5.8	19:00	5.7	0:24	1.5	12:55	1.4
25	w.	7:24	5.5	19:32	5.7	1:10	1.2	13:30	1.5	25	F.	7:16	6.0	19:36	5.8	1:00	1.4	13:31	1.2
26	Th.	7:54	5.7	20:05	5.8	1:41	1.1	14:02	1.3	26	Sa.	7:48	6.2	20:11	5.9	1:35	1.4	14:06	1.0
27	F.	8:23	5 9	20:38	5.8	2:10	1.1	14:32	1.2	27	\$.	8:21	6.3	20:48	5.9	2:10	1.5	14:43	0.0
28	Sa.	8:53	6.0	21:12	5.8	2:40	1.2	15:04	1.1	28	NI.	8:57	6.4	21:28	5.8	2:46	1.6	15:26	0.9
29	5.	9:25	6.0	21:49	5.7	3:11	1.4	15:40	1.2	29	Tu.	9:37	6.3	22:12	5.7	3:25	1.8	16:14	1.0
30	NI.	10:00	6.0	22:28	5.6	3:44	1.6	16:21	1.3	30	w.	10:22	6.1	23:02	5.5	4.10	2.1	17:08	1.2
			٧	, .						31	Th.	11:14	5.9			5:06	2.3	18:09	1.3
		J				1										1			

The TIME used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides; that is, from the same Datum to which the soundings are referred, on the Admiralty chart of Halifax harbour.

The Dry Dock.—To find the depth of water on the sill of this dock at any tide, add 23.4 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Halifax, are given on page 10.

				N(VE	MBER	,							Di	CE	MBER				
		HI	GH V	VATER				VATER.				Н	IGH	WATER		Low Water.				
Date.	Day.							Time.	H't.	Date.	Day.				-			Time.		
1	F.	н. м.	FT. 5·4	н. м.	FT. 5.7	н. м.	гт. 2.5	н. м.	FT.	1	5	н. м.	FT. 5.7	н. м.	FT.	н. м.	FT. 2·2	н. м.		
2	Sa.	1:08		13:18	5.5	7:52	2.4	20:27	1.4	2	MI.	1:52		14:18	5.4	8:46	2.0		1.4	
3	5	2:16	5.3	14:30	5.4	9:06	2.2	21:28	1.3	3	Tu.	2:55	5.8	15:27	5.4	9:44	1.7	21:58	1.5	
4	DE.	3:24	5.2	15:46	5.4	10:09	1.8	22:25	1.2	4	W.	3:57	6.0	16:30	5.2	10:39	1.5	22:50	1.7	
5	Tu.	4:28	5.8	16:52	5.6	11:05	1.4	23:17	1.1	5	Th.	4:54	6.1	17:28	5.6	11:33	1.3	23:40	1.8	
6	w.	5:22	6.1	17:48	5.8	11:54	1.1			6	F.	5:44	6.2	18:21	5.7			12:24	1.1	
7	Th.	6:11	6.3	18:38	6.0	0:05	1.1	12:41	0.8	2	Sa.	6:31	6.3	19:10	5.8	0:28	1.9	13:10	1.0	
8	F.	6:56	6.5	19:25	6.1	0:51	1.2	13:26	0.7	8	\$	7:14	6.4	19:56	5.9	1:14	2 0	13:52	0.9	
9	Sa,	7:38	6.6	20:09	6.1	1:36	1.3	14:10	0.6	9	MI.	7:56	6.3	20:40	5.8	1:58	2.1	14:32	1.0	
10	\$	8:19	6.5	20:52	6.0	2:20	1.5	14:53	0.7	10	Tu.	8:38	6.2	21:22	5.8	2:41	2.2	15:12	1.0	
11	W.	8:59	6.4	21:34	5.9	3:03	1.8	15:35	0.9	11	W.	9:20	6.1	22:03	5.7	3:24	2.4	15:53	1.2	
12	Tu.	9:40	6.1	22:18	5.7	3:46	2.1	16:18	1.1	12	Th.	10:03	5.9	22:44	5:5	4:08	2.5	16:35	1'4	
13	W.	10:22	5.8	23:05	5.5	4:32	2.4	17:03	1.4	13	F.	10:47	5.6	23:26	5.4	4:54	2.6	17:20	1.6	
14	Th.	11:09	5.2	23:56	5.3	5:25	2.7	17:54	1.7	14	Sa.	11:32	5.1			5:45	2.7	18:09	1.8	
15	æ.			12:01	5.2	6.27	2.9	18:50	1.8	15	\$	0:10	5.3	12:18	5.2	6:39	2.7	19:00	1.9	
16	Sa.	0:51	5.1	12:58	5.0	7:34	2.9	19:48	2.0	16	'M.	0:57	5.3	13:06	5.1	7:35	2.7	19:52	2.0	
17	\$	1:48	5.0	13: 58	4.9	8:35	2.8	20:44	2.0	17	Tu,	1:47	5.3	13:59	5.0	8:29	2.6	20:42	2.1	
18	M.	2:46	5.1	14:59	4.9	9:26	2.6	21:33	2.0	18	W.	2:38	5.4	14:56	5.0	9:22	2:3	21:28	2.2	
19	Tu.	3:42	5.2	15:57	5.0	10:14	2.3	22:18	2.0	19	Th.	3:30	5.6	15:55	5.1	10:14	2.1	22:13	2.2	
20	W.	4:31	5.4	16:50	5.2	10:58	2.0		1.9	20	F.	4:21	5.8	16:56	5.3	11:04	1.7	22:58	2.1	
21	Th.	5.14	5.7	17:39	5'4	11:40	1.7	23:43	1.8	21	Sa.	5:11	6.1	17:53	5.2	11:51	1.4	23:46	2.0	
22	F.	5:54	6.0	18:24	5.6			12:21	1.4	22	\$	5:59	6.3	18:44	5.7			12:37	1.0	
23	Sa.	6:33		19:07	5.8	0;24	1.8	13:02	1.1	23	MI.	6:46	6.2		5.9	0:35		13:22	0.7	
24	\$	7:13		19:50	5.9		1.7	13:44	0.9	24	Tu.	7:33	6.7	20:19	6.1	1:25	1.8		0.5	
25	NA.	7:54	6.6		6.0	1:45	1.7	14:27	0.7	25	W.	8:21	6.7	21:06	6.2	2:16	1.7	,	0.4	
26	Tu.	8:36	6.6		6.0	2:27	1.8		0.7	26	Th.	9:11	6.6	21:55	6.2	3:10	1.7	15:53	0.4	
27	W.	9:21	6.5		5.9	3:14	1.9		0.8	27	F.	10:03	6.5	22:46	6:1	4:10	1.8		0.5	
28	Th.	10:10	6:3		5.8	4:08	2.1	17:00	0.9	28	Sa.	10:57	6.2		6.1	5:14		17:42	0.8	
29	F,	11:05	6.0		5.7	5:16		18:02	1.0	29	5	11:53	6.0	10.51		6:21		18:38	1.0	
30	Sa,			12:05	5.8	6:35	2.3	19:06	1.2	30	MI.	0:34	6.0	12:51	5·7, 5·4	7:26 8:26		19:35	1.3	
										31	Tu,	1:31	.5-9	13:52	0.4	8:20	1.8	20:33	1.6	

The TIME used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at ordinary Spring Tides; that is, from the same Datum to which the soundings are referred, on the Admiralty chart of Halifax harbour.

The DRY DOCK.—To find the depth of water on the sill of this dock at any tide, add 23.4 feet to the height of High Water as above given. The TIDAL DIFFERENCES referred to Halifax are given on page 10.

			JANUA	ARY.								FI	EBR	UARY	7.			
ດຳ		HIGH '	WATER.	Low WATER.				ช์		Hi	 GН \	VATER		L	ow I	VATER	ATER.	
Date.	Day.	Time. H't.	Time. H't.	Time. H	I't. T	Cime.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	
		H. M. FT.	H. M. FT.	н. м.	ET.	н. м	FT			н. м.	FT	н. м.	ET.	н. м.	FT.	н. м.	FT.	
1	IVI.	8:33 24.5				14:48	2.1	1	Th.			22:29		3:44	3.2	16:15	1.3	
2	Tu.	9:27 25:3	21:56 23.9	3:06	3.0	15:44	1.3	2	F.	10:52	26.3	23:24	24.9	4:39	2.3	17:11	0.5	
3	w.	10:18 26:0	22:47 24.5	4:01	2.6	16:36	0.8	3	Sa.	11:44	26.9			5:32	1.4	18:04	0.0	
4	Th.	11:07 26:6	23:36 24.9	4:54	2.2	17:27	0.4	4	\$.	0:13	25.6	12:34	26.9	6:24	0.9	18:54	0.0	
5	æ.	11:55 27.1		5:46	1.8	18:18	0.2	5	IVE.	1:01	2 5·8	13:23	26.6	7:15	0.8	19:43	0.4	
6	Sa.	0:26 25.3	12:44 27:1	6:38	1.6	19:10	0.3	6	Tu.	1:50	25.6	14:12	25.9	8:07	1.1	20:33	1.2	
7.	5.	1:17 25:3	13:35 26.6	7:31	1.6	20:03	0.7	17	w.	2:40	25.2	15:02	24.8	9:00	1.7	21:24	2.2	
8	IVIL.	2:09 25.1	14:28 25.8	8:25	1.9	20:57	1.3	8	Th.	3:31	24.5	15:54	23.6	9:53	2.6	22:16	3.4	
9	Tu.	3:02 24:7	15:24 24:9	9:20	2.5 5	21:50	2.1	9	F.	4:24	23.6	16:50	22.4	10:47	3.6	23:10	4.5	
10	w.	3:57 24.1	16:23 23:8	10:17	3.1	22:46	3.1	10	Sa.	5:19	22.9	17:48	21.4	11:43	4.5			
11	Th.	4:55 23.5	17:23 22:8	11:15	3.6	23:43	4.1	11	5.	6:16	22.2	18:50	20.6	0:08	5.5	12:40	5.1	
12	F.	5:54 23.0	18:23 21.9			12:14	4.2	12	IVII.	7:15	21.9	19:51	20.4	1:08	6:1	13:38	5.3	
13	Sa.	6:52 22.6	19:22 21:4	0:41	4.9	13:13	4.6	13	Tu.	8:13	21.8	20:49	20.5	2:07	6:3	14:35	5.2	
14	5.	7:48 22:5	20:20 21:1	1:39	5.4	14:11	4.6	14	w.	9:07	22.1	21:42	20.8	3:02	6.1	15:28	4.9	
15	IVII.	8:41 22:6	21:15 21:2	2:36	5.5	15:07	4.5	15	Th.	9:56	22.5	22:29	21.4	3:51	5.8	16:14	4.5	
16	Tu.	9:31 22:9	22:06 21:4	3:29	5.6	15:58	4.3	16	F.	10:40	22.9	23:10	21.8	4:32	5.3	16:55	4.1	
17	w.	10:18 23.1	22:52 21.7	4:17	5.4	16:42	4.1	17	Sa.	11:18	23.2	23:46	22.2	5:10	4.9	17:32	3.8	
18	Th.	11:00 23:4	23:31 21.9	4:59	5'3	17:21	3.9	18	5.	11:53	23.4			5:46	4.5	18:07	3.6	
19	F.	11:40 23:5		5:37	5.2	17:58	3.8	19	NI.	0:20	22.5	12:27	23.4	6:21	4.2	18:41	3.5	
20	Sa.	0:07 22:0	12:19 23:4	6:13	5.1	18:33	3.8	20	Tu.	0:53	22.8	13:01	23.4	6:56	4.0	19:15	3.5	
21	5 .	0:42 22:0	12:57 23:4	6:48	5.0	19:07	3.9	21	w.	1:26	23.0	13:36	23.3	7:32	3.8	19:51	3.7	
22	MI.	1:18 22:1	13:35 23.2	7:24	5.0	19:42	4.0	22	Th.	2:01	23.2	14:15	23.0	8:11	3.7	20:31	3.9	
23	Tu.	1:55 22.2	14:14 22:9	8:02	4.9	20:20	4.1	23	F.	2:39	23.2	15:00	22.6	8:54	3.7	21:17	4.2	
24	w.	2:34 22.2	14:54 22:6	8:43	4.8	21:02	4.3	24	Sa.	3:24	23.2	15:50	22.2	9:45	3.8	22.08	4.6	
25	Th.	3:15 22.2	15:36 22.2	9:28	4.7	21:48	4.5	25	\$.	4:15	23.1	16:48	21.7	10:43	4.1	23:05	5.1	
26	F.	4:00 22:3	16:21 21:9	10:16	4.7	22:38	4.8	26	IVII.	5:14	22.9	17:51	21.2	11:44	4.2			
27	Sa.	4:48 22:4	17:11 21.5	11:08	4.6	2 3:31	5.0	27	Tu.	6:18	22.9	18:58	21.2	0:07	5.3	12:49	4.1	
28	\$.	5:40 22.6	18:10 21:3			12:06	4.5	28	w.	7:28	23.2	20:08	21.8	1:18	5.1	13:55	3.6	
29	W.	6:39 22:9	19:15 21.5	0:29	5.1	13:08	4.1	29	Th.	8:37	23.9	21:15	22.9	2:24	4.4	15:01	2.6	
30	Tu.	7:44 23:5	20:22 22:0	1:34	4.8	14:14	3.4											
31	w.	8:50 24.4	21:28 22:9	2:42	4.2	15:16	2.4											
	70 70															. 1 7		

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of Low Water at spring Tides, as ascertained by the tide gauge observations themselves. (This level is approximately $1\frac{1}{2}$ feet lower than the Datum to which the soundings on the chart of St. John harbour are referred, as nearly as this can now be ascertained.)

TIDAL DIFFERENCES and other information for the Bay of Fundy are given on page 11,

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é		Нісн	WATER.	Lov	v W	ATER.		8		HIGH	WATER.	Low V	V ATER.	
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1	F.	9:39 24.9	22:14 24:1	3:26	3.3	16:02	1.6	1	M.	11:12 25.8	23:34 26.1	5:03 1.1	17:26	1.2
2	Sa.	10:36 2 5·9	23:07 25:1	4:24	2.0	16:57	0.8	2	Tu.		12:00 25:9	5:50 0.7	18:11	1.3
3	5.	11:27 26:4	23:54 25.8	5:17	1.0	17:46	0.4	3	w.	0:18 26.3	12:44 25 6	6:35 0.9	18:54	1.9
4	M.		12:16 26:6	6:07	0.5	18:32	0.4	4	Th.	1:01 26:0	13:27 24.9	7:19 1:3	19:37	2.8
5	Tu.	0:40 26.1	13:04 26:3	6:55	0.5	19:17	0.9	5	\mathbf{F}_{\bullet}	1:44 25.5	14:11 24:0	8:03 2:1	20:21	3.9
6	w.	1:26 26:0	13:51 25:5	7:42	0.9	20:03	1.7	6	Sa.	2:29 24:6	14:57 22:9	8:48 3.2	21:08	5.0
7	Th.	2:13 25·4	14:38 24:5	8:30	1.7	20:51	2.9	7	\$.	3:17 23:7	15:45 22:0	9:35 4.2	21:58	6.0
8	Æ•	3:01 24.6	15:26 23:3	9:19	2.7	21:41	4.1	8	IVI.	4:08 22:8	16:37 21:0	10:26 5:2	22:51	6.8
9	Sa.	3:51 23.7	16:16 22:1	10:10	3.8	22:34	5.3	9	Tu.	5:03 21.9	17:37 20:5	11:21 5.8	23:47	7.3
10	5.	4:42 22:8	17:09 21:0	11:04	4.8	23:29	6.2	10	w.	6:01 21:3	18:42 20:2		12:20	6.2
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12	Tu.	6:32 21.4	19.14 20.1	0:26	6.8	13:02	5.9	12	F.	7:58 21:3	20:35 21:0	1:44 6:9	14:13	5.8
13	w.	7:33 21:3	20:19 20:2	1:24	6.9	14:01	5.8	13	Sa.	8:50 21:8	21:19 21:8	2:39 6.2	15:02	5.3
14	Th.	8:35 21.5	21:19 20:7	2:24	6.6	14:56	5.4	14	5.	9:36 22:4	21:59 22:6	3:26 5:3	15:45	4.7
15	F.	9:31 22:0	22:06 21:5	3:19	6.0	15:43	4.9	15	MI.	10:17 23:0	22:37 23:4	4:07 4:4	16:24	4.1
16	Sa.	10:16 22:7	22:42 22:1	4:03	5.3	16:24	4.3	16	Tu.	10:56 23.5	23:14 24:2	4:45 3.6	17:02	3:7
17	\$.	10:54 23:1	23:14 22:8	4:42	4.5	17:02	3.9	17	w.	11:34 24:0	23:51 24:9	5:22 2:9	17:40	3.2
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22	F.	1:32 24.3	13:51 23:5	7:48	2.8	20:06	3.8	22	PH.	2:46 24.9	15:13 23:0	9:08 3:0	21:30	5.0
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25	M.	3:56 23.7	16:28 21:9	10:20	3.8	22:46	5.4	25	Th.	5:50 23.1	18:33 22:2		12:17	4.3
26	Tu.	4:57 23:2	17:34 21:4	11:24	4.2	23:56	5.6	26	F.	7:00 23:1	19:44 22:8	0:50 5.2	13:25	4.1
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28	Th.	7:14 23:0	19:57 22:1	1:06	5.3	13:44	3.9	28	5.	9:08 24:0	21:40 24:6	3:00 3:4	15:26	3.0
29	F.	8:23 23.6	21:01 23:2	2:15	4.5	14:49	3.1	29	M.	10:02 24:6	22:29 25:3	3:54 2:4	16:17	2.6
30	Sa.	9:26 24:5	21:58 24:3	3:17	3.3	15:47	2.1	30	Tu.	10:51 24:9	23:15 25:9	4:42 17	17:04	2.5
31	\$.	10:21 25:3	22:48 25	4:14	2:0	16:38	1.5							
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The Height is measured from the level of Low Water at Spring Tides, as ascertained by the tide gauge observations themselves. (This level is approximately 1½ feet lower than the datum to which the soundings on the chart of St. John harbour are referred, as nearly as this can now be ascertained).

TIDAL DIFFERENCES and other information for the Bay of Fundy, are given on page 11.

HIGH WATER. Low Water Time. H't. Time. H't. Time. H't. Time H. M. FT. H. M. FT. H. M. FT. H. M. 1 W. 11:38 24:9 23:58 26:0 5:27 1:5 17:44 2 Th	e. H't. I. FT. 8 2.7 0 3.3	Day.	н. м. гт.		Low W	
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28	\$.	11:23 22:2	23:31 23:8	5:13 3:9	17:32 5:2	28	w.		12:10 22:8	5:55 3.6 18:1	3 4.2
29	IVII.		12:00 22:4	5:48 3.8	18:09 5:0	29	Th.	0:18 23.6	12:42 23:0	6:27 3.6 18:4	6 40
30	Tu.	0:09 23:7	12:36 22:6	6:22 3:8	18:44 4.9	30	F.	0:52 23.5	13:15 23:1	7:00 3.7 19:2	0 3.9
31	w.	0:46 23:7	13:12 22:6	6:56 3.8	19:18 4:8	31	Sa.	1:27 23:3	13:49 23:2	7:34 3.9 19:5	7 4.0
			1.12 (1)	1 1 0	11 0011 35		1	1		11 0 11	

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Hright is measured from the level of Low Water at Spring Tides, as ascertained by the tide gauge observations themselves. (This level is approximately 1½ feet lower than the datum to which the soundings on the chart of St. John harbour are referred, as nearly as this can now be ascertained.)

Tidal Differences and other information for the Bay of Fundy, are given on page 11.

		The state of the s	SEPT	ΓEM	IBER	/+							0	СТО	BER.	==		
		Нісн	WATER.		L	ow V	VATER.	-			Н	IGH '	WATER		L	ow V	VATER.	
Date.	Day.	Time. H't	Time. E	I't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
1	5.	н. м. гт 2:04 23°		- 1	н. м. 8:12	FT. 4·2	н. м. 20:38	FT. 4.0	1	Tu.	н. м. 2:18	FT. 22.9	н. м. 14:38		н. м. 8:23	FТ. 4°5	н. м. 20:50	FT. 3.7
2	M.	2:44 22	15:06 2	23.2	8:54	4.5	21:24	4.2	2	w.	3:01	22:3	15:26	23.6	9:14	5.0	21:47	4.0
3	Tu.	3:28 22	15:52 2	3.0	9:40	5.0	22:14	4.4	3	Th.	3:51	21.8	16:23	23.2	10:14	5.5	22:51	4.4
4	w.	4:18 21	16:45 2	22.8	10:34	5.4	23:11	4.6	4	F.	4:56	21.4	17:29	22.9	11:20	5.7	23:58	4.5
5	Th.	5:17 21	17:49 2	22.7	11:36	5.7			5	Sa.	6:07	21.3	18:39	22 ·9			12:28	5.6
6	F.	6:25 20	18:58 2	22.9	0:14	4.6	12:46	5.7	6	5.	7:20	21.8	19:49	23.4	1:05	4.2	13:37	4.9
7	Sa.	7:34 21	20:06 2	23.5	1:20	4.2	13:54	5.0	7	M.	8:28	22.9	20:54	24.2	2:10	3.5	14:44	3.7
8	5.	8:42 22	21:09 2	24.5	2:27	3.4	14:57	3.9	8	Tu.	9:27	24.1	21:50	25.1	3:10	2.5	15:42	2.4
9	M.	9:43 23	22:06 2	25.6	3:29	2.2	15:57	2.5	9	w.	10:20	25.3	22:43	25.9	4:05	1.6	16:34	1.2
10	Tu.	10:38 25	22:59 2	26.5	4:25	1.1	16:52	1.2	10	Th.	11:10	26.2	23:32	26.2	4:56	1.1	17:23	0.5
11	w.	11:28 26	23:50 2	26:9	5:16	0.4	17:43	0.4	11	F.	11:57	26.6			5:44	1.0	18:11	0.4
12	Th.		12:16 2	26.6	6:06	0.5	18:33	0.2	12	Sa.	0:19	26.0	12:41	26.6	6:30	1.4	18:58	0.8
13	F.	0:40 26	13:03 2	26.7	6:55	0.4	19:22	0.4	13	5.	1:05	25.4	13:24	26.2	7:15	2 ·2	19:44	1.4
14	Sa.	1:29 26:	13:50 2	26.3	7:43	1.2	20:10	1.0	14	M.	1:52	24.5	14:09	25.3	8:00	3.2	20:31	2.5
15	5.	2:17 25	14:38	25.4	8:31	2.3	20:58	2.1	15	Tu.	2:40	23.5	14:57	24:3	8:48	4.1	21:20	3.6
16	M.	3:05 24	15:26 2	24.4	9:20	3 ·5	21:48	3.2	16	w.	3:30	22.4	15:48	23.3	9:40	.5.2	22:11	4.6
17	Tu.	3:56 22	16:17 2	23.4	10:11	4.8	22:41	4.4	17	Th.	4:22	21.5	16:42	22.4	10:34	6.3	23:06	5.4
18	w.	4:54 21	17:14 2	22.4	11:06	5.9	23:39	5.2	18	F.	5:17	20.8	17:40	21.7	11:31	6.9		
19	Th.	5:55 20	7 18:14 2	21.8		***	12:07	6.6	19	Sa.	6:16	20.5	18:40	21.4	0:03	5.9	12: 31	7.0
20	F.	6:57 20	3 19:18 2	21.5	0:41	5.7	13:10	6.8	20	\$.	7:17	20.6	19:38	21.4	1:01	6.0	13:30	6.7
21	Sa.	8:00 20	20:20 2	21.7	1:43	5.9	14:12	6.6	21	M.	8:16	21.0	20:31	21.7	1:56	5.8	14:23	6.1
22	5.	8:58 20	21:14 2	22.1	2:40	5.4	15:04	6.0	22	Tu.	9:07	21.7	21:19	22.2	2:46	5.3	15:10	5.3
23	NI.	9:47 21	21:59 2	22.6	3:29	4.9	15:50	5.3	23	w.	9:50	22.4	22:04	22.7	3:30	4.8	15:52	4.6
24	Tu.	10:28 22	2 22:40 2	23.0	4:12	4.4	16:33	4.6	24	Th.	10:27	23.2	22:44	23.1	4:10	4.4	16:31	3.9
25	w.	11:05 22	23:18 2	23.3	4:50	4.0	17:10	4.1	25	F.	11:02	23.8	23:21	23.4	4:48	4.0	17:09	3.4
26	Th.	11:39 23	3 23:54 2	23.5	5:26	3.8	17:43	3.7	26	Sa.	11:36	24.4	23:57	23.6	5:25	3.9	17:46	2.9
27	F.		12:12	23.6	6:00	3.7	18:15	3.4	27	\$.			12:11	24.8	6:02	3.8	18:24	2.7
28	Sa.	0:29 23	6 12:44 2	23.9	6:33	3.8	18:48	3.2	28	ŅI.	0:33	23.6	12:49	24.9	6:40	3.9	19:04	2.6
29	\$.	1:04 23	5 13:17 2	24.1	7:06	3.9	19:24	3.3	29	Tu.	1:12	23.5	13:30	24 9	7:20	4.1	19:48	2.8
30	M.	1:40 23	2 13:55 2	24.1	7:41	4.2	20:04	3.4	30	w.	1:56	23.2	14:16	24.6	8:05	4.5	20:37	3.2
									31	Th.	2:46	22.8	15:09	24.2	8:59	4.9	2 1:34	3.6

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of the Low Water at Spring Tides, as ascertained by the tide gauge observations themselves. (This level is approximately 1½ feet lower than the datum to which the soundings on the chart of St. John harbour are referred, as nearly as this can now be ascertained.)

Tidal Differences and other information for the Bay of Fundy, are given on page 11.

-								1						-
			NOVE	MBER.							DECEN	IBER.		
		HIGH V	VATER.	Lo	wV	VATER.				High \	WATER.	Low	WATER.	
Date.	Day.	Time, H't.	Time, H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time. H't.	Time. H't.	Time. H't	Time. H	ľt.
		H. M. FT.	H. M. FT.	н. м.	FT.	н. м.	FT.			н. м. FT.	H. M. FT.	н. м. гт.	н. м. г	т.
1	F.	3:44 22.4	16:08 23:7	10:00	5.3	22:35	4.0	1	Ş	4:34 23:0	17:00 23:6	10:50 4:	5 23:23 3	3.7
2	Sa.	4:47 22:0	17:12 23:2	11:06	5.4	23:40	4.2	2	M.	5:40 22:9	18:05 23:1	11:56 4:	5	
3	5.	5:54 22:1	18:20 23:0			12:15	5.2	3	Tu.	6:44 23:0	19:09 23:0	0:27 3:9	9 13:03 4	4.1
4	M.	7:03 22:5	19:30 23:2	0:47	4.1	13:23	4-5	4	w.	7:45 23.5	20:10 23:1	1:30 3:5	9 14:06 3	3.6
5	Tu.	8:08 23:3	20:34 23.7	1:53	3.6	14:26	3.5	5	Th.	8:42 24.1	21:08 23:3	2:30 3:8	8 15:05 3	3.0
6	w.	9:06 24:3	21:28 24:3	2:52	3.0	15:22	2.5	6	F.	9:36 24.6	22:03 23.6	3:26 3:0	6 16:00 2	2.5
7	Th.	9:59 25.3	22:19 24.8	3:45	2.5	16:15	1.6	7	Sa.	10:27 25.1	22:52 23.6	4:18 3:	5 16:49 2	2.2
8	F.	10:48 25:9	23:08 25:0	4:36	2.2	17:05	1.2	8	€.	11:15 25:2	23:40 23.6	5:07 3:	5 17:34 2	2 ·2
9	Sa.	11:34 26:2	23:56 24:9	5.25	2.3	17:51	1.2	9	NI.		12:00 25.2	5:53 3:8	8 18:17 2	2.5
10	5.		12:18 26:1	6.10	2.7	18:35	1.5	10	Tu.	0:26 23.4	12:42 24.9	6:36 4:5	2 18:59 3	3.0
11	NI.	0:43 24.4	13:01 25:6	6:53	3.4	19:18	2.4	11	w.	1:10 23:0	13:22 24:4	7:17 4:	7 19:40 3	3.5
12	Tu.	1:29 23:7	13:44 24.9	7:36	4.2	20:02	3.2	12	Th.	1:52 22:7	14:03 23.8	7:58 5:	2 20:22	4.0
13	w.	2:14 23:0	14:28 24.1	8:20	5.0	20:48	4.0	13	F.	2:33 22.2	14:46 23:2	8:40 5	6 21:05	4.5
14	Th.	3:00 22:2	15:16 23:3	9:08	5.8	21:36	4.8	14	Sa.	3:15 21.9	15.32 22.6	9:26 6:0	0 21:50	5.0
15	F.	3:48 21.7	16:07 22:5	10:00	6.3	22:26	5.4	15	5.	4:01 21.6	16.20 22.0	10:15 6:	1 22:37	5.4
16	Sa.	4:40 21.2	17:00 21.8	10:54	6.8	23:19	5.8	16	IVI.	4:50 21:4	17:10 21:5	11:06 6:	2 23:26 3	5.6
17	5.	5:35 20:9	17:54 21:4	11:49	6.8			17	Tu.	5:42 21.3	18:02 21:1	11:58 6:	2	
18	M.	6:31 20.9	18:49 21·2	0:14	6.0	12:44	6.6	18	w.	6:36 21:4	18:55 21:0	0:16 5		6.0
19	Tu.	7:26 21.2	19:43 21·3	1:07	5.9	13:36	6.2	19	Th.	7:29 21:8	19:49 21.1			5.5
20	w.	8:18 21.8	20:35 21:7	1:56	5.7	14:25	5.5	20	F.	8:19 22:4	20:43 21.5	1:57 5	7 14:29 4	4.9
21	Th.	9:06 22:5	21:23 22:2	2:43	5.3	15:11	4.7	21	Sa.	9:07 23.2] 21:35 22 [.] 0	2:46 5:	3 15:19	4.0
22	w.	9:47 23:3	22:07 22:7	3:27	4.9	15:54	4.0	22	\$.	9:53 24.1	22:24 22:7	3:36 4		3.1
23	Sa.	10:26 24:1	22:49 23:1	4:09	4.5	16:36	3.2	23	IVI.	10:37 25:0	23:09 23:4	4:25 4:	1 16:56 2	2.2
24	5.	11:04 24:9	23:29 23:5	4:50	4.1	17:18	2.6	24	Tu.	11:20 25:7	23:53 24:0	5:13 3:	5 17:43 1	1.6
25	WE.	11:43 25.4		5:32	3.8	18:01	2.2	25	w.		12:05 26.2	6:01 3:	1 18:31 1	1.3
26	Tu.	0:10 23:8	12:25 25:7	6:16	3.7	18:46	2.0	26	Th.		12:56 26.3			1.2
27	w.		13:11 25:7	7:04	3.8	19:34	2.1	27	F.		13:51 26:1		7 20:11 1	
28	Th.		14:01 25:4	7:55	3.9	20:26	3.4	28	Sa.		14:48 25.4		8: 21:04 1	
29	F.		14:56 24:9	8:49	4.2		2.9	29	\$.		15:46 24:7		1 22:02 2	
30	Sa.		15:56 24.2	1		22:21	3.4	30	NI.	F.	16:45 23:7		1 23:04 3	
		2.00 23 2	- 100 21 2		- 1	30.01		31	Tu.		17:46 23:0			
		1						1			2,710 20 0	12.00	1	

The Height is measured from the level of Low Water at Spring Tides, as ascertained by the tide gauge observations themselves. (This level is approximately 1½ feet lower than the datum to which the soundings on the chart of St. John harbour are referred, as nearly as this can now be ascertained).

Tidal Differences and other information for the Bay of Fundy, are given on page 11.

		<u> </u>	JANUA	RY.						FEBRUA	.RY.		
e l		High '	WATER.	Low V	VATER.	on.	e.	٠	HIGH	WATER.	Low	WATER.	on.
Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.	Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.
12 33 44 56 77 89 10 112 113 114 114 117 119 119 122 122 123 124 125 126 127 128 129 129 129 129 129 129 129 129 129 129	M. Tu. W. Th. Sa. S. M. Tu. V. Th. F. Sa. S. M. Tu. V.	H. M. 7 26 8 20 9 11 10 00 10 48 11 37 0 10 10 10 10 10 10 10 10 10 10 10 10 1	H. M. 19 54 20 49 21 40 22 29 23 19 12 28 13 21 14 17 15 16 16 16 17 16 18 15 19 13 20 08 20 59 21 45 22 24 23 00 23 35 12 28 13 47 14 17 15 16 16 16 16 17 16 18 15 19 13 20 08 20 59 21 45 22 24 23 00 23 35 12 28 13 07 14 29 15 14 16 04 17 03 18 08 19 15 19 15 19 15 10 04 17 03 18 08 19 15 19 15 19 15 19 16 19 17 19 17 19 18 19 18 20 21	H. M. 0 54 1 51 2 46 3 39 4 31 5 23 6 16 7 10 00 10 59 11 58 0 24 1 21 1 21 1 22 14 3 02 2 4 58 5 33 6 09 6 47 7 7 28 8 13 9 01 9 53 10 51 11 53 0 19 1 27	H. M. 13 33 14 29 15 21 16 12 17 03 35 21 31 22 28 26	•	1 2 3 4 4 5 6 6 7 7 8 9 10 0 11 1 12 13 14 15 16 6 17 18 19 20 21 22 23 4 25 26 27 28 29	Th. F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. Tu. Tu. Th. F. Sa. Tu. Th. F. Sa. Tu.	H. M. 8 47 9 45 10 37 11 27 0 43 1 33 2 24 4 12 5 09 6 08 7 06 8 00 8 49 9 33 10 11 54 1 32 2 17 3 08 4 07 5 11 6 21 7 30	H. M. 21 22 22 17 23 06 23 54 12 16 13 05 13 55 14 47 15 43 16 41 17 43 42 20 35 21 22 20 33 23 46 12 29 13 08 13 53 14 43 15 41 16 44 17 51 19 01 20 08	H. M. 2 29 3 24 4 17 5 09 6 00 6 52 7 45 8 38 9 32 10 28 11 25 0 52 1 47 2 36 3 17 3 55 41 31 5 06 5 41 6 17 6 56 7 39 28 10 29 28 10 29 28 10 29 11 34 0 03 1 09	H. M. 15 00 15 56 16 49 17 39 18 28 19 18 20 09 21 01 21 55 22 53 13 20 14 13 20 14 15 40 16 17 26 18 36 19 16 20 02 20 53 21 50 22 52 52	
		,	MAR	CH.	,		[1	APRIL	•	<u> </u>	,
12 33 44 55 77 89 10 112 134 115 116 117 118 119 22 22 23 24 24 25 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. Th. F. Sa. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. S. S.	H. M. 8 32 9 29 10 20 11 09 11 57 0 19 1 06 1 54 28 44 3 35 6 6 26 6 26 6 7 28 8 24 9 09 47 10 21 10 54 11 27	H. M. 21 07 22 00 22 47 23 33 3	H. M. 2 111 3 099 4 022 4 52 5 40 6 27 7 15 8 04 8 55 9 49 10 47 11 47 0 099 1 109 2 04 8 3 27 4 03 4 38 5 14 5 52 6 33 7 18 8 08 9 05 10 09 11 18	H. M. 14 47 15 42 16 31 17 17 18 02 18 48 19 36 20 26 21 19 22 14 23 11 14 28 15 09 16 58 17 33 16 58 17 33 18 10 18 51 19 38 20 31 21 31 22 41 23 51 12 29 13 34 14 32 15 23	•	1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 28 29 30 30 30 30 30 30 30 30 30 30 30 30 30	M. Tu. W. Th. F. Sa. S. M. Tu. Sa. S. M. Tu. F. Sa. M. Tu. F. Sa. M. Tu. F. Sa. Tu. Th. F. Sa. Tu. Th. Th. Tu. Th. Tu. Th. Tu. Th. Tu. Th. Tu.	H. M. 10 05 10 53 11 37	H. M. 222 277 23 111 23 54 112 200 13 04 13 50 14 38 15 30 16 30 17 35 18 36 19 28 20 12 20 52 21 30 22 20 77 22 44 23 22 13 11 14 06 15 08 16 15 17 26 18 37 19 39 20 33 21 22 20 08	H. M. 3 48 4 35 5 20 6 04 8 48 7 33 8 20 9 11 10 06 11 15 0 29 1 24 2 11 2 52 3 30 4 07 4 45 5 26 6 09 6 57 7 53 8 53 8 53 8 53 8 53 8 53 8 53 8 53 8	H. M. 166 11 16 56 17 39 18 22 19 06 19 53 20 43 21 36 22 32 23 30 12 58 13 47 14 30 15 09 15 47 16 25 17 04 17 45 18 29 19 19 20 15 21 17 22 24 23 35 12 10 13 14 14 11 15 02 15 49	•

The Time used is Atlantic Standard, for the 60th Meridian. It is counted from 0 to 24 hours, from midnight to midnight.

The Height of High Water at Yarmouth, above the level of Low Water at ordinary Spring Tides, is found by multiplying the height at St. John by 0.55; that is, it is a little more than half the height given for High Water in the St. John tide tables.

==			MAY	7.						JUNE.	0.50	WHITELE SA THE SECTION	
		HIGH \	VATER.	Low V	VATER.	'			HIGH V		Low V	VATER,	i i
Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.	Date.	Day.		After'n.		After'n.	Moon.
1 2 3 4 4 5 6 6 7 7 8 9 10 11 11 12 21 13 14 15 16 17 18 19 20 21 22 22 23 24 25 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	W. Th. Sa. S. M. Tu. V. Th. Sa. S. M. Tu. V. Th. F. Sa. S. M. Tu. V. Th. F. Sa. M. Tu. V. Th. F. Sa. Tu. Tu. Tu. Th. F. Sa. Tu. Tu. Tu. Th. F. Sa. Tu. Tu. Th. F.	H. M. 10 31 11 15 11 57 0 12 0 53 1 36 2 22 23 13 4 08 5 05 6 03 6 59 7 48 8 32 9 14 9 55 10 37 11 21 0 31 1 27 4 30 6 38 7 40 8 37 40 8 37 40 8 37 9 28 10 12 10 54	H. M. 22 51 23 32 32 14 04 14 53 15 49 16 48 17 45 18 37 19 26 20 09 20 51 21 32 22 14 22 57 23 42 12 09 13 02 14 01 15 03 16 07 17 12 18 15 19 13 20 08 20 58 20 58 21 43 22 25 23 05	H. M. 4 12 4 56 5 39 6 21 7 03 7 46 8 31 9 20 10 14 11 10 37 1 25 2 10 2 53 3 36 4 20 5 05 5 5 3 6 44 7 40 8 9 42 10 47 11 52 0 24 1 21 21 21 23 54 35 55 51 4 35	H. M. 16 33 17 15 17 55 18 36 19 19 20 06 20 59 21 54 22 50 23 45 12 07 13 01 13 48 14 31 15 56 16 40 17 25 18 13 19 07 20 05 21 08 22 17 23 23 23 12 52 13 48 14 40 15 28 16 12 16 53		1 2 3 4 5 6 6 7 8 9 10 11 11 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 20 20 20 20 20 20 20 20 20 20 20 20 20	\$a. \$. M. Tu. W. Th. \$sa. \$. M. Th. F. \$a. \$. M. Th. F. \$a. \$. M. Tu. W. Th. F. \$a. \$. M. Th. \$a. \$. M. Th. \$a. \$. M. Th. \$a. \$a. \$a. \$a.	H. M. 11 35 0 24 1 06 1 51 2 39 3 29 4 21 5 15 6 10 7 03 7 54 8 43 9 31 10 19 11 08 11 59 0 17 1 12 2 10 3 10 4 13 5 16 6 17 7 15 8 11 9 03 9 50 10 33 11 13	H. M. 23 44 122 15 56 13 38 14 23 15 11 16 01 16 54 17 48 18 41 19 32 20 20 20 21 06 21 51 22 37 23 25	H. M. 5 17 5 58 6 38 7 18 8 00 8 45 9 33 10 25 11 18 0 41 1 33 14 4 03 2 24 3 14 4 03 7 26 8 21 9 20 10 22 11 25 1 57 2 48 3 32 4 14 4 54	H. M. 17 33 18 12 18 52 19 35 20 21 10 22 01 22 54 8 12 11 13 03 13 53 14 42 15 30 16 18 49 19 20 45 21 50 6 23 59 12 26 13 25 14 20 15 09 15 52 16 31 17 09	•
			JULY.]			AUGUST			
1 2 3 4 5 6 7 7 8 9 10 11 11 12 13 11 15 16 17 18 19 20 21 22 22 24 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	M. Tu. W. Th. F. Sa. S. M. Tu. V. Th. V. Th. F. Sa. S. M. Tu. V. Tu. V.	H. M. 11 52 0 04 45 1 27 2 09 2 52 3 37 4 25 5 17 6 14 9 10 03 10 55 11 46 0 01 0 53 1 48 2 47 4 48 5 50 6 53 7 53 8 47 9 35 10 16 10 53 11 29	H. M	H. M. 5 23 6 111 6 50 7 29 8 69 8 51 9 36 11 21	H. M. 17 477 477 18 25 19 05 19 47 20 31 21 19 22 10 23 23 23 59 12 20 13 21 14 19 15 13 16 05 16 57 17 50 41 22 31 22 31 22 31 22 31 22 31 22 31 23 32 12 57 13 55 14 48 15 35 16 17 29 18 03	•	1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 6 27 28 30 31	Th. F. Sa. J. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. J. M. Tu. W. Th. F. Sa. J. M. Tu. W. Th. Sa. Sa. M. Tu. Sa.	H. M. 0 16 0 54 1 33 2 14 4 2 57 5 39 6 49 7 56 8 55 9 50 10 41 11 31 11 31 11 34 2 27 3 21 4 17 5 18 6 25 7 28 8 25 9 13 9 53 10 29 11 03 11 03 11 03 11 03	H. M. 12 43 13 21 14 00 14 41 15 25 16 13 17 09 18 12 19 16 20 18 21 16 22 10 23 01 12 20 13 10 14 53 15 46 20 40 21 25 22 02 22 37 23 11 23 45 12 08 12 42	H. M. 6 16 6 53 7 33 8 16 9 01 9 50 10 46 11 49 0 27 1 32 2 33 3 29 4 22 2 7 42 2 7 42 8 33 9 26 10 23 11 24 0 00 1 1 57 2 47 2 47 4 40 5 45 6 19	H. M. 18 38 19 16 19 57 20 42 21 30 22 24 23 23 23 25 25 25 25 25 25 25 25 25 25 25 25 25	•

The TIME used is Atlantic Standard, for the 60th Meridian. It is counted from 0 to 24 hours, from midnight

The Time used is Atlantic Standard, for the ooth Meridian. It is counted from 0 to 24 hours, from mionight to midnight.

The Height of High Water at Yarmouth, above the level of Low Water at ordinary Spring Tides, is found by multiplying the height at St. John by 0.55; that is, it is a little more than half the height given for High Water in the St. John tide tables.

							} [=
			SEPTEM							OCTOBE		F. T.	
Date.	Day.		WATER.	Low V		Moon.	Date.	Day.		WATER.		VATER.	Moon.
<u>A</u>	<u> </u>	Morn'g.	After'n.	Morn'g.	After'n.	2		<u> </u>	Morn'g.		Morn'g.		2
1 2 3 3 4 5 5 6 6 7 7 8 9 10 0 11 1 12 13 14 15 16 6 17 7 18 19 20 22 23 22 25 26 6 27 28 29 30	S. M. Tu. Sa. S. M. Tu. Th. F. Sa. S. M. Tu. Th. F. Sa. S. M. Tu. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M.	H. M. 0 57 1 37 2 21 3 11 4 10 5 18 6 27 7 35 8 36 9 31 11 09 11 58 2 49 9 11 15 8 40 6 53 7 51 8 40 9 21 1 9 58 10 32 11 05 11 37 0 33	H. M. 13 18 59 14 45 15 38 16 42 17 51 18 59 20 02 22 43 23 33	H. M. 6 57 7 39 8 25 9 19 10 21 11 31 0 05 11 22 14 3 10 14 51 5 40 6 28 7 16 8 56 8 56 9 51 10 52 11 55 2 14 11 1 55 21 14 4 51 6 26 11 25 5 51 8 5 6 26	H, M. 19 23 20 09 20 59 21 56 22 59 	•	1 2 3 4 4 5 5 6 6 7 8 8 9 10 11 11 12 13 11 14 15 16 6 17 18 19 20 22 23 24 22 5 26 27 28 29 3 3 1	Tu. W. Th. Sa. S. M. Th. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. Sa. Tu. W. Th. Sa. Tu. Th. Th.	H. M. 1 11 1 54 2 44 3 49 5 00 6 13 7 21 8 20 9 13 10 03 10 50 11 34 0 45 1 33 2 23 3 15 5 09 6 10 7 09 8 00 8 43 9 20 9 55 10 29 9 55 10 29 11 42 0 05 0 49 1 39	H. M. 13 31 14 19 15 16 16 22 17 32 18 42 19 47 20 43 21 36 22 25 58 12 17 33 02 13 50 14 41 15 35 16 33 17 33 18 31 19 24 20 57 21 37 22 14 22 50 23 12 20 57 21 37 22 14 22 50 23 13 09 14 02	H. M. 7 08 8 59 10 05 11 13 0 55 15 6 00 6 45 7 33 8 25 9 19 10 16 11 16 0 41 1 31 2 15 52 55 3 33 4 10 4 47 5 25 6 6 50 7 44	H. M. 19 35 20 32 21 36 22 43 23 50 12 22 21 13 29 14 27 15 19 16 56 17 43 18 29 19 16 56 20 56 21 51 22 48 23 46 12 15 13 08 13 55 14 37 6 15 54 16 15 54 16 17 49 18 33 19 22 20 19	•
		1	NOVEME	ER.			-	,	D	ECEMBI	ER.	1 1	
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 23 24 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	F. Sa. S. MI. Tu. Y. Sa. S. MI. Tu. Y. Th. F. Sa. MI. Tu. Th. F. Sa.	H. M. 2 37 3 40 4 47 5 56 7 01 7 59 8 52 9 41 10 27 11 11 154 0 22 1 07 1 53 2 41 3 33 4 28 5 24 6 19 7 11 7 59 8 40 9 19 9 57 10 36 11 18 0 36 1 29 2 26	H. M. 15 01 16 05 01 17 13 18 23 19 27 20 21 22 21 12 22 20 1 22 3 36 16 47 17 42 18 36 19 28 20 16 21 00 21 42 22 23 03 23 47 12 03 12 54 13 49 14 49	H. M. 8 45 9 51 11 00	H. M. 21 20 22 25 23 32 12 08 13 11 4 07 15 00 16 36 17 20 18 03 18 47 19 33 20 21 11 22 04 22 59 23 52 12 21 13 10 13 56 14 39 15 21 16 03 16 46 17 31 18 19 11 20 07 21 06	•	1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 1 22 23 24 25 26 29 28 29 30 31	M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. M. Tu. W. Th. Tu. Tu. Tu.	H. M. 3 27 4 33 5 37 6 38 7 35 5 8 29 9 20 10 08 11 35 0 45 1 26 2 28 08 46 9 30 10 58 11 49 0 20 1 13 2 10 3 10 4 11	H. M. 15 53 16 58 18 02 19 03 20 01 20 56 21 45 22 33 19	H. M. 9 35 10 41 11 48 0 15 1 15 2 11 3 03 3 52 4 38 5 21 6 02 4 38 7 25 8 11 9 00 9 51 10 43 11 34 11 34 12 21 3 10 3 58 4 46 5 35 6 27 7 22 8 20 9 21 10 23	H. M. (22 08 23 12 12 51 13 50 14 45 15 34 16 19 17 02 17 44 18 25 19 07 19 50 20 35 21 22 21 11 23 01 23 52 12 24 13 14 04 14 53 15 41 16 28 17 16 18 05 18 56 19 49 20 47 21 49 22 52	•

The TIME used is Atlantic Standard, for the 60th Meridian. It is counted from 0 to 24 hours, from midnight to midnight.

The Height of High Water at Yarmouth, above the level of Low Water at ordinary Spring Tides, is found by multiplying the height at St. John by 0.55; that is, it is a little more than half the height given for High Water in the St. John tide tables.

£			JANUAI	RY.					· 1	EBRUA	EY.	=	
		HIGH V	WATER.	Low V	VATER.	n.	· ·		Нібн Л	VATER.	Low V	VATER.	m.
Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.	Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.
1 2 3 4 4 5 6 7 8 9 10 11 12 13 4 1 1 5 16 17 18 19 20 21 22 23 4 25 5 26 27 28 30 31	M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Tu. W. Th. W.	H. M. 7 255 8 27 9 20 10 09 10 56 11 44 12 32 0 56 1 57 3 00 4 05 5 13 6 24 7 37 8 42 9 37 10 22 11 01 11 35 12 07 12 38 0 34 1 21 2 14 4 25 5 44 7 04 8 12	H. M. 18 36 19 19 20 06 20 58 21 55 22 55 23 55 13 19 14 05 14 51 15 37 16 23 17 08 17 08 18 40 19 25 20 10 20 56 21 41 22 23 23 06 23 49 13 08 13 37 14 06 14 36 15 07 15 44 16 36 17 41 18 48	H. M. 0 27 1 22 2 15 3 07 3 57 4 47 5 36 6 24 7 13 8 02 8 54 9 48 10 44 11 38 0 40 1 35 2 24 3 08 3 49 4 28 5 41 6 6 51 7 26 8 04 8 04 9 48 10 40 1 35 1 36 1	H. M. 12 30 13 26 14 22 15 16 16 08 16 59 17 49 18 39 19 31 20 28 21 30 22 35 23 40 12 36 13 30 14 21 15 11 15 55 16 37 17 17 17 56 18 33 19 11 19 52 20 41 21 37 22 40 23 47 12 58	•	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	Th. F. Sa. F. W. Th. F. Sa. W. Th. F. Sa. W. Th. F. Sa. W. Th. Th. Th. Th. Th. Th. Th. Th. Th. Th	H. M. 9 10 00 10 43 11 23 12 02 038 13 33 4 43 35 566 7 088 16 9 13 9 59 10 55 11 08 11 36 12 00 0 27 1 11 59 2 58 4 14 5 38 6 58 8 08	H. M. 19 58 21 00 21 57 22 52 52 23 45 12 40 13 54 14 34 15 17 48 18 51 19 51 20 44 21 23 12 45 13 33 14 06 14 57 16 01 17 22 18 50	H. M. 1 57 22 52 44 4 32 5 18 6 02 6 45 7 28 8 15 9 05 9 56 10 49 11 48 1 00 1 59 2 46 3 27 4 06 4 44 5 19 5 51 6 53 7 28 8 11 9 04 10 18 11 38 0 43	H. M. 14 02 15 02 15 02 15 56 16 46 17 35 56 18 22 19 10 19 58 20 50 21 46 22 48 23 50	0
			MARCH	H.					-	APRIL.			
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 30 31	F, Sa. S. M. Tu. F. Sa. S. M. Tu. W. Th. F. Sa. S. S. S. S. S.	H. M. 9 00 9 42 10 19 10 53 11 26 11 58 2 03 3 00 4 05 5 18 6 33 7 46 8 39 9 16 9 44 10 11 26 0 13 0 58 1 48 2 54 4 11 5 31 6 45 7 46 8 38 9 19	H. M. 20 00 21 04 22 01 22 52 23 40 13 33 14 09 14 49 16 57 18 23 19 30 20 29 21 17 22 04 22 48 23 30 15 53 13 37 14 34 15 53 17 32 19 06 20 16 21 13	H. M. 1 48 2 43 3 31 4 12 4 52 5 31 6 08 6 47 7 28 8 14 9 04 1 28 2 15 2 56 3 35 11 4 45 5 18 5 51 6 24 7 03 7 51 8 52 10 10 11 40 0 32 1 37 2 29	H. M. 14 05 14 58 15 45 16 27 17 08 18 30 19 14 20 02 20 56 21 55 23 05 12 36 13 42 14 31 15 11 15 48 16 23 16 57 17 34 18 12 18 53 19 38 20 37 21 51 23 11 15 11 25 56 13 55 14 46	♡	1 2 3 4 5 6 6 7 8 9 10 11 11 13 14 15 16 17 18 19 20 22 23 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. Tu. W. Th. Tu. Th. Tu.	H. M. 9 54 10 25 10 53 11 22 0 18 1 03 1 49 2 39 3 37 4 47 6 01 7 00 7 47 8 24 8 53 9 21 9 50 10 19 10 48 0 06 0 55 1 50 2 52 4 02 5 14 6 22 7 19 8 05 8 39 9 08	H. M. 22 03 22 48 23 33	H. M. 3 15 3 59 4 38 5 14 5 50 6 25 7 02 7 41 8 26 9 24 10 48	H. M. 15 30 16 12 16 52 17 32 18 11 19 33 20 20 20 15 12 15 12 15 17 15 54 16 32 20 27 21 37 22 27 21 37 22 17 12 44 13 42 14 30 15 12	

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Tidal Differences for the leading ports on Northumberland strait are given on page 9, and the nature of the Tidal Streams in that strait and the Gut of Canso are explained on pages 9 and 10.

====			MAY							JUNE.			
	. ——	Нтан 1	WATER.	Low V	Varrin				Нісн і	WATER.	Low V	VATER	
Date,	Day.		After'n.	Morn'g.	After'n.	Moon.	Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.
1 2 3 3 4 5 6 7 8 9 9 10 11 12 11 11 11 11 11 11 11 11 11 11 11	W. Th. F. Sa. S. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Tu. W. Th. F.	H. M. 9 36 10 03 10 32 0 00 0 44 1 30 11 30 11 4 10 10 11 10 10 11 10 10	H. M. 22 35 23 17 11 03 11 34 12 05 12 39 13 17 14 19 15 44 17 29 18 47 19 49 20 38 21 25 22 13 23 00 23 49 11 33 14 42 16 16 16 17 43 18 55 19 59 20 55 21 44 22 29 23 10	H. M. 3 27 4 03 4 39 5 16 5 52 6 29 7 09 7 58 9 03 10 23 11 34 	H. M. 15 53 16 31 17 09 17 46 18 22 19 01 13 32 22 40 23 46 12 34 14 55 26 16 16 09 16 52 17 38 18 26 19 17 20 14 21 20 22 32 44 13 22 14 09 14 51 15 33 16 12		1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 4 15 16 17 18 9 20 21 22 2 2 2 2 2 2 2 2 3 0 3 0	\$a. \$. M. Tu. W. F. \$a. \$. M. Tu. W. Th. F. \$a. \$. M. Tu. W. Th. F. \$a. M. Tu. Th. F. \$a. \$. M. Tu. \$a. \$. M. Tu. \$a. \$a. \$a. \$a. \$a. \$a. \$a. \$a. \$a. \$a	H. M. 10 02 10 34 0 31 1 14 1 59 2 45 3 31 4 15 4 56 6 14 6 51 7 27 8 06 8 50 0 24 1 15 2 07 2 59 3 4 55 37 6 24 4 5 6 8 22 8 5 6 9 37	H. M. 23 50	H. M. 4 17 4 55 5 33 6 11 6 53 7 40 8 35 9 34 10 36 11 35 0 30 1 22 2 13 3 04 4 4 44 5 36 6 29 7 26 8 27 9 31 1 48 0 04 11 48 0 57 1 44 2 2 77 3 12 3 57	H. M. 16 49 17 26 18 02 18 39 19 19 19 20 04 21 45 22 39 23 36 12 32 13 25 14 12 14 58 15 45 16 32 17 22 18 13 19 06 20 01 21 00 22 02 23 04 12 48 13 40 14 27 15 11 15 53 16 33	⊕
		,,	JULY	•						AUGUS	T.		
1 2 3 4 4 5 6 6 7 7 8 9 10 11 2 13 14 4 15 6 17 7 18 9 20 2 2 2 3 2 4 2 2 5 2 6 2 7 7 2 8 9 3 0 3 1	M. Tu. W. Th. Sa. S. M. Tu. W. Th. Sa. Su. Tu. W. Th. Su. Tu. W. Th. Su. Tu. W. Th. Su. Tu. W.	H• M• 10 18 0 22 1 00 11 37 2 11 37 2 44 4 19 4 55 5 43 6 37 7 36 8 38 9 38 10 36 0 07 0 52 1 38 2 24 3 11 3 59 4 47 5 32 6 18 7 05 7 51 8 39 9 28 10 16 11 00	H. M. 11 02 11 46 12 31 13 19 14 11 15 09 16 19 17 37 18 53 19 56 20 52 21 44 22 33 23 20 11 33 12 30 15 39 16 53 18 68 19 21 20 29 21 22 22 05 22 43 23 17 23 51	H. M. 4 42 5 25 6 04 6 44 7 26 8 11 9 01 9 54 10 50. 11 51	H. M. 17 13 17 13 17 51 18 28 19 04 19 42 20 22 21 03 22 45 12 46 22 43 14 18 02 18 48 15 32 16 24 17 14 18 02 21 22 22 22 12 20 25 21 20 22 22 22 12 13 16 14 16 18 16 55 17 32	0	1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 2 13 14 4 15 16 17 18 9 2 0 2 1 2 2 2 3 2 4 4 2 5 5 2 6 2 7 2 8 8 2 9 3 3 0 3 1	Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. Tu. Th. F. Sa.	H. M. 0 23 0 52 2 1 18 1 43 2 09 40 10 52 15 2 55 26 6 38 7 40 6 6 38 7 40 6 6 38 7 40 0 59 11 34 0 06	H. M. 11 42 12 25 13 08 13 56 61 4 51 15 55 17 12 18 32 19 43 20 39 21 31 22 19 22 59 23 35 12 18 13 12 14 08 15 09 16 17 17 32 18 50 00 21 00 21 45 22 18 22 47 23 15 23 42 12 15	H. M. 5 399 6 16 16 54 7 34 8 18 8 18 9 05 10 03 11 14 O 18 1 27 2 30 3 28 4 20 5 07 5 53 6 40 7 29 8 24 9 23 10 26 11 32 O 44 1 48 2 41 3 24 4 03 4 40 5 17 5 52	M. H. 18 06 18 38 19 09 19 42 20 19 21 53 22 55 12 21 13 23 14 20 15 16 16 68 16 56 17 41 18 23 19 66 19 49 20 36 21 29 22 30 23 33 12 47 14 37 15 17 15 53 16 28 17 02 17 34 18 05	6

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TIDAL DIFFERENCES for the leading ports on Northumberland strait are given on page 9, and the nature of the TIDAL STREAMS in that strait and the Gut of Canso are explained on pages 9 and 10.

-			SEPTEN	MBER.						остові	PP		
a:		HIGH V		Low V	VATER.				Нісн '	WATER.	Low V	VATER	
Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Moon.	Date.	Day.	Morn'g.		Morn'g.		Moon.
12344 5667789 10111213144 116177189 2212234 222234 2232267329	S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. M.	H. M. 0 29 0 52 1 16 1 43 2 21 3 17 4 36 6 6 08 7 32 8 42 9 40 10 31 11 20 0 09 0 43 1 17 1 54 2 37 3 28 4 43 6 6 09 7 19 8 17 9 06 9 53 10 37 11 18 12 00	H. M. 12 57 13 43 14 36 15 42 17 02 18 22 19 35 20 31 21 15 21 53 22 29 23 36 12 09 12 58 13 50 14 46 15 47 18 10 19 24 20 20 20 59 21 29 21 47 22 22 24 46 23 11 23 36 12 46	H. M. 6 27 7 03 7 44 8 32 9 33 10 52 9 3 17 4 05 16 6 20 7 05 7 52 8 43 9 39 10 47 11 56 0 22 1 27 2 17 2 59 3 36 4 11 4 46 5 20 5 55	H. M. 18 37 19 10 19 47 20 29 21 32 22 56 12 07 13 15 14 12 15 05 16 36 17 18 17 58 18 37 19 16 19 59 20 48 21 45 22 58 13 07 14 02 14 45 15 22 15 56 16 29 17 02 17 31 18 08	· D	1 2 3 3 4 4 5 6 6 7 8 9 10 11 11 12 13 14 15 16 17 18 20 21 22 23 24 25 26 27 28 30 31	Tu. W. Th. F. Sa. M. Tu. W. Th. F. Tu. Th. Th. Th. Th. Th. Th. Th. Th.	H. M. 0 02 0 31 1 1 07 1 57 3 11 4 45 6 22 7 37 8 400 9 35 10 24 11 10 61 12 42 1 0 30 1 0 8 1 50 0 8 50 9 34 10 16 10 59 11 44 12 32 1 0 06	H. M. 13 34 14 28 15 35 17 01 18 13 19 13 20 00 20 40 21 16 21 50 22 20 22 51 23 55 13 30 14 21 15 17 16 22 17 32 18 36 19 26 20 05 21 28 21 28 21 54 22 22 23 25 21 28 21 54 22 22 23 26 13 25 14 26	H. M. 6 33 7 15 8 09 9 18 10 40 11 56 6 12 5 53 6 34 7 17 17 8 04 8 59 10 04 11 19	H. M. 18 45 19 29 20 21 21 31 22 56 13 00 13 56 14 44 15 29 16 11 16 51 17 29 18 06 18 44 19 24 20 09 21 10 22 25 23 42 12 24 13 19 24 13 15 49 16 26 17 05 18 30 19 23	•
			NOVEM	BER.					,	DECEM	BER.	-	
1° 2° 3° 4° 5° 6° 6° 7° 8° 9° 10° 11° 12° 13° 11° 11° 11° 11° 11° 11° 11° 11° 11	F, Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F, Sa. M. Tu. W. Th. F, Sa. S. M. Tu. Th. F, Sa. S. M. Tu. W. Th. F, Sa. S. S. M. Tu. W. Th. F, Sa. Sa. W. Tu. W. Th. F, Sa.	H. M. 1 01 2 09 3 31 5 04 4 8 43 9 33 10 21 11 06 11 49 12 32 13 16	H. M. 155 34 16 41 17 43 18 37 19 26 20 08 20 44 21 17 21 50 22 19 23 21 23 56 14 03 14 55 15 51 16 48 17 41 18 25 19 06 19 41 20 11 20 41 21 13 21 47 22 25 08 13 14 11 15 09	H. M. 8 02 9 10 10 24 11 38 0 07 1 97 1 97 1 57 2 44 3 29 4 11 4 52 5 33 6 13 6 54 7 37 8 25 9 19 10 20 11 18 0 13 1 05 1 47 2 26 6 03 6 03 6 54 7 49	11. M. 200 27 21 38 22 54 12 44 13 37 14 21 15 05 15 48 16 27 17 06 17 44 18 22 19 02 19 48 20 47 21 58 23 10 12 19 13 12 13 57 14 36 15 14 15 53 16 35 17 20 18 13 19 11 20 16		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 24 25 27 28 28 29 20 30 31 31 31 31 31 31 31 31 31 31 31 31 31	5. M. Tu. W. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. Tu. Tu.	H. M. 2 13 3 41 5 10 6 26 7 34 8 30 9 20 10 08 11 36 12 18 12 59 0 25 1 14 2 10 3 17 4 36 5 50 6 56 7 54 8 47 9 39 11 19 12 09 11 19 12 09 11 07 2 15 3 30	H. M. 166 07 17 04 17 56 18 42 19 22 11 10 21 47 22 23 23 00 13 41 14 23 15 06 15 49 16 31 17 09 17 47 18 26 19 04 19 45 20 31 21 19 22 12 23 08 12 57 13 44 14 31 15 16 13	H. M. S 51 9 58 11 10 10 10 10 10 10 10 10 10 10 10 10	H. M. 21 266 22 38 23 46 12 12 12 13 04 13 51 14 36 15 19 16 01 16 43 17 24 18 04 18 04 18 04 18 05 19 13 00 14 42 15 32 16 23 17 14 18 05 18 59 19 56 21 00 22 08	

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=:									-			1					-		===
1				J A	NU	ARY.								FE	BRU	JARY			
te.	.y.	Н1	GH T	WATER	i	L	ow V	VATER.		Date.		Н	IGH	WATER		L	ow V	VATER.	
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Da	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
		н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н. м.	FT.	н. м.		н. м.	FT.
1	PI.	7:50	6.7	19:03	7.8	1:06	1.8	13:12	3.8	1	Th.	9:43	7:0	20:34	8.1	2:46		14:54	4.2
2	Tu.	8:57	7.0	19.52	8.1	2:07	1.1	14:15	4.0	2	F.	10:38	7.4	21:40	8.3	3:46	0.4	15:58	3.8
3	w.	9:56	7.3	20:44	8:3	3:07	0.5	15:16	3.9	3	Sa.	11:25	7.7	22:41	8.6	4:42	0.1	16:55	3.5
4	Th.	10:49	7.5	21:40	8.5	4:04	0.0	16:14	3.8	4	5.	12:08	7.9	23:38	8.7	5:32	0.0	17:46	2.6
5	F.	11:40	7.8	22:40	8.7	4:56	-0.4	17:08	3.2	5	MI.			12:48	8.0	6:18	0.2	18:35	2.1
6	Sa.	12:30	8.0	23:41	8.8	5:47	-0.5	17:59	3.5	6	Tu.	0:31	8.7	13:26	8.0	7:02	0.6	19:22	1.7
7	5.	1		13:18	8.0	6:36	-0.3	18:49	2.9	7	w.	1:23	8.4	14:01	7.9	7:44	1.1	20:08	1.2
8	PI.	0:41	8.6	14.04	8.0	7:24	0.0	19:38	2.6	8	Th.	2:14	8.0	14:35	7.7	8:25	1.8	20:53	1.5
9	Tu.	1:40	8.4	14:48	7.9	8:11	0.6	20:28	2.4	9	F.	3:07	7.5		7.6	9:07		21:39	1.0
10	w.	2:38	8.0	15:30	7:7	8:57	1.3	21:20	2.2	10	Sa.	4:06	6.9	15:47	7.4	9:50	2.2	22:28	1.7
11	Th.	3:36	7.6	16:10	7.5	9:43	2.1	22:15	2.1	11	5.	5:10	6.5	16:29	7.3	10:35	3.8	23:24	1.9
12	F.	4:35	7.1	16:50	7.4	10:30	2.8	23:14	2.0	12	IVII.	6:20	6.2	17:16	7.2	11:25	4.3		
13	Sa.	5:38	6.7	17:32	7.3	11:20	3.4			13	Tu.	7:32	6.1	18:12	7.1	0:26	2.0	12:24	4.6
14	5.	6:48	6 ·5	18:17	7.3	0:16	1.8	12:14	3.9	14	w.	8:40	6.2	19:16	7.0	1:36	1.9	13:40	4.7
15	MI.	8:01	6.4	19:05	7:3	1:16	1.7	13:12	4.2	15	Th.	9:40	6.5	20:21	7.1	2:41	1.8	14:48	4.6
16	Tu.	9:09	6.5	19:55	7:3	2:14	1.5	14:12	4.4	16	F.	10:32	6.8	21:20	7.2	3:35	1.5	15:46	4.2
17	w.	10:10	6.6	20:46	7.3	3:09	1.3	15:10	4.4	17	Sa.	11:13	7.0	22:14	7.4	4:21	1.3	16:34	3.8
18	Th.	11:00	6.8	21:36	7.4	4:00	1.1	16:05	4.3	18	چ.	11:49	7:3	23:05	7.6	5:03	1.2	17:17	3 4
19	F.	11:42	7.0	22:23	7.5	4:45	1.0	16:52	4.2	19	MI.	12:20	7.4	23:50	7.7	5:43	1.2	17:57	3.0
20	Sa.	12:19	7:1	23:08	7.5	5:26	0.9	17:36	4.0	20	Tu.			12:46	7.4	6:19	1:3	18:34	2.6
21	5.	12:53	7.2	23:52	7.5	6:05	1.0	18:17	3.8	21	w.	0:32	7.7	13:09	7.4	6:51	1.6	19:09	2.3
22	M.			13:24	7.2	6:41	1.1	18:56	3.6	22	Th.	1:13	7.6	13:30	7.4	7:21	2.0	19:43	2.0
23	Tu.	0:35	7.4	13:53	7.1	7:16	1.4	19:33	3.4	23	F.	1:55	7.4	13:50	7.5		2.5		
24	w.	1:18	7:3	14:20	7:0	7:50	1.8	20:09	3.1	24	Sa.	2:40	7.1	14:12	7.6			}	
25	Th.	2:02	7:1	14:45	7:0	8:23	2.3	20:47	2.8	25	5.	3:34	6.7	14:39	7:7	9:00	3.6	21:44	15
26	F.	2:50	6.8	15:09	7.1	8:56	2.7	21:30	2.5	26	M.	4:44	6.4	15:24	7.7	9:46	4.1	22:50	1.2
27	Sa.	3:44	6.6	15:34	7:3	9:31	3.5	22:19	2.2	27	Tu.	6:03	6.3	16:25	7.6	10:54	4.5		
28	5.	4:50	6.4	16:08	7.5	10:15	3.7	23:16	1.9	28	W.	7:22	6.4	17:46	7.5	0:04	1:	12:14	4.7
29	PH.	6:08	6.3	17:00	7.6	11:14	4.1			29	Th.	8:33	6.6	19:17	7:6	1:19	1.4	13:38	4.5
30	Tu.	7:28	6.4	18:06	7.7	0:23	1:0	12:28	4.4			1							
31	w.	8:39	6.6	19:18	7.8	1:38	1.2	13:43	4*5										
																		-	

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight

 $[\]dot{}$ The Height is measured from the level of the lower Low Water at Spring Tides, as ascertained by the tide gauge observations themselves.

The nature of the Tidal Streams in Northumberland strait is explained on page 10.

			_ = =										:						= ;
_					MAI	RCH.									AP	RIL.			
	I	Н	IGH '	WATER	R	L	ow V	VATER.		No.		Н	IGH	WATER		L	ow V	VATER.	
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
		Н. М.	FT,	н. м.	FT.	н. м.	FT.	Н. М.	FT.			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.
1	F.	9:30	7.0	20:33	7.8	2:30	1.2	14:50	4.0	1	M.	10:32	7.6	22:43	8.3	4:07	1.5	16:24	1.7
2	Sa.	10:18	7:3	21:42	8.1	3:32	0.9	15:50	3.3	2	Tu.	11:07	7.7	23:32	8:3	4:55	1.6	17:10	1.0
3	5,	10:59	7.6	22:43	8.4	4:25	0.7	16:41	2.5	3	w.	11:38	.7.8			5:37	1.9	17:52	0.6
4	IVE.	11:37	7.8	23:37	8.6	5:10	0.7	17:26	1.8	4	Th.	0:19	8.2	12:08	7.9	6:14	2.2	18:32	(•4
5	Tu.			12:12	7.9	5:52	0.9	18:08	1.3	5	w.	1:04	7.9	12:37	7.8	6:50	2.6	19:11	0.5
6	. w.	0:26	8.6	12:44	8.0	6:31	1.3	18.49	1.0	6	Sa.	1:48	7.5	13:04	7.7	7:25	3.1	19:50	0.8
7	Th.	1:12	8.3	13:14	7.9	7:08	1.8	19:30	0.9	7	5.	2:32	7.0	13:30	7.6	8:00	3.6	20:30	1.2
8	F.	1:57	7.8	13:43	7.8	7.46	2.4	20.12	1.0	8	M.	3:18	6.5	13:57	7.4	8:36	4.0	21:12	1.6
9	Sa.	2:44	7.3	14:12	7.7	8:25	3.1	20:57	1:3	9	Tu.	4:10	6.1	14:27	7.1	9:15	4.4	22:00	2.1
10	5.	3:36	6.7	14:42	7.5	9:06	3.6	21:45	1.6	10	w.	5:14	6.0	15:16	6.8	10:06	4.7	23:01	2.4
11	M.	4:35	6.3	15:16	7.3	9:49	4.2	22:37	2.0	11	Th.	6:25	6.0	16:37	6.5	11:24	4.8		
12	Tu.	5:43	6.0	16:03	7.0	10:36	4.6	23:41	2.3	12	F.	7:24	6.2	18:17	6.4	0:10	2.6	12:41	4.5
13	w.	6:57	6.0	17:21	6.8	11:45	4.8			13	Sa.	8:11	6.5	19:38	6.6	1:16	2.6	13:46	4.0
14	Th.	8.10	6.1	18:47	6.7	1:00	2.3	13:12	4.8	14	5.	8:51	6.9	20:41	6.9	2:14	2.5	14:43	3.4
15	F.	9:04	6.5	19:57	6.8	2:04	2.2	14:21	4.4	15	MI.	9:26	7.1	21:37	7.3	3:04	·2·4	15:30	2.6
16	Sa.	9:46	6.8	21:02	7.1	2:57	2.0	15:16	3.9	16	Tu.	9:59	7.4	22:28	7.6	3:46	2.3	16:11	1.8
17	۶.	10:20	7.1	21:55	7.4	3:45	1.8	16.03	3.3	17	w.	10:31	7.6	23:17	7.9	4:26	2:3	16:51	1.1
18	DI.	10:51	7:3	22:45	7.7	4:29	1.7	16:44	2.6	18	Th.	11:03	7.9			5:05	2.4	17:31	0.5
19	Tu.	11:20	7.5	23:32	7.9	5:08	1.6	17:21	2.0	19	F.	0:05	8.0	11:34	8.1	5:45	2.6	18:12	0.1
20	w.	11:47	7.7			5:44	1;8	17:57	1.5	20	Sa.	0:5	7.9	12:06	8.2	6:26	2.9	18:53	0.0
21	Th.	0:16	7.9	12:12	7.8	6:18	2.0	18:34	1.1	21	5.	1:41	7.7	12:39	8.2	7:08	3.3	19:35	0.0
22	F.	0:59	7.9	12:36	7.9	6:51	2.4	19:12	0.9	22	M.	2:34	7.4	13:15	8.1	7:52	3.7	20:20	0.3
23	Sa.	1:43	7.6	13:02	7.9	7:24	2.9	19:52	0.8	23	Tu.	3:33	7.1	14:03	7.8	8:41	4.1	21:22	0.8
24	5.	2:31	7:3	13:34	7.9	8:01	3.4	20:35	0.8	24	w.	4:38	6.9	15:09	7.4	9:41	4.3	22:26	1.3
25	MI.	3:33	6.9	14:13	7.8	8:46	4.0	21:29	1.1	25	Th.	5:44	6.8	16:36	7:1	10:58	4.3	23:39	1.7
26	Tu.	4:44	6.6	15:04	7.6	9.41	4.4	22:36	1.4	26	F.	6:47	6.9	18:14	7.0			12:12	3.9
27	w.	5:58	6.5	16:18	7.3	10:52	4.7	23:50	1.6	27	Sa.	7:43	7.0	19:37	7.2	0:54	1.9	13:20	3.5
28	Th.	7:09	6.6	17:56	7.2			12:16	4.6	28	5.	8:30	7.2	20:40	7.5	2:00	2.1	14:21	2.4
29	F.	8:10	6.8	19:31	7.3	1:08	1.7	13:32	4.0	29	MI.	9:09	7.4	21:38	7.7	2:53	2.2	15:15	1.6
30	Sa.	9:05	7.1	20:46	7.6	2:16	1.6	14:37	3.3	30	Tu.	9:44	7.5	22:30	7.8	3:39	2.3	16:04	1.0
31	\$.	9:52	7.4	21:49	8.0	3:14	1.5	15:35	2.4										

The Height is measured from the level of the lower Low Water at Spring Tides, as ascertained by the tide gauge observations themselves.

The nature of the TIDAL STREAMS in Northumberland strait is explained on page 10.

					M A	V									= - JUI	VE.			
		HIG	GH V	VATER.			ow V	VATER.				Hie	H W	ATER.			ow V	VATER	
Date.	Day.	Time.								Date.	Day.			Time.	H't.				
_								<u>-</u>				н. м.		н. м.	2000	н. м.	E3/E1	н. м.	FT.
1	w.	н. м.	7·6	н. м. 23:17	FT. 7.8	н. м. 4:21	2·5	н. м. 16:49	FT.	1	Sa.	10:47	FT. 7.6	н. м.	FT.	н. м. 5:16	3.8	17:49	0.3
2	Th.	10:47	7.7			5:01	2.8	17:30	0.3	2	5.	0:36	7.1	11:20	7:6	5:55	3.9	18:26	0*5
3	F.	0:02	7.7	11:18	7.7	5:39	3.1	18:09	0.2	3	VE.	1:17	6.9	11:52	7.5	6:33	4.1	19:02	0.8
4	Sa.	0:46	7.4	11:49	7.7	6:16	3.4	18:46	0.4	4	Tu.	1:59	6.7	12:25	7.3	7:11	4.2	19:38	1.2
5	5.	1:30	7:1	12:19	7.6	6:52	3.7	19:22	0.7	5	w.	2:42	6.6	13:00	7.0	7:51	4.3	20:16	. 1.6
6	IVE.	2:14	6.7	12:48	7.5	7:28	4.0	19:59	1.1	6	Th.	3:24	6.9	13:42	6.8	8:35	4.3	20:56	2.1
7	Tu.	2:59	6.4	13:18	7.2	8:06	4.3	20:38	1.6	7	F.	4:04	6.4	14:34	6.5	9:24	4.2	21:39	2.4
8	w.	3:47	6.2	13:50	6.9	8:50	4.5	21:22	2.1	8	Sa.	4:42	6.4	15:50	6.2	10:16	4.0	22:24	2.8
9	Th.	4:40	6.1	14:46	6.6	9:48	4.6	22:15	2.5	9	\$.	5:20	6.5	17:14	6.1	11:12	3.6	23:15	3.1
10	F.	5:36	6.2	16:08	6.3	11:02	4.5	23:16	2.7	10	M.	5:59	6.7	18:37	6.2			12:11	3.0
11	Sa.	6:28	6.3	17:53	6.2			12:10	4.1	11	Tu.	6:38	7.0	19:47	6.4	0:12	3.3	13:11	2.3
12	5 .	7:12	6.6	19:11	6.4	0:22	2.9	13:10	3.5	12	w.	7:18	7.3	20:48	6.7	1:12	3.5	14:10	1.2
13	IVIC.	7:50	6.9	20:16	6.7	1:22	2.9	14:02	28	13	Th.	8:00	7.7	21:44	7.1	2:11	3.6	15:04	0.8
14	Tu.	8:25	7.2	21:11	7.1	2:15	2.9	14:49	2.0	14	F.	8:44	8.0	22:38	7.4	3:07	3.6	15:54	0.2
15	w.	9:00	7.5	22:03	7.5	3:04	2.9	15:36	1.2	15	Sa.	9:31	8.3	23:29	7 6	4:01	3.6	16:43	-0.3
16	Th.	9:36	7.8	22:54	7.7	3:50	3.0	16:22	0.4	16	5.	10:23	8.5	1		4:53	3.6	17:32	-0.6
17	F.	10:13	8.2	23:44	7.8	4:35	3·1	17:07	-0.1	17	MI.	0:19	7.8	11:18	8.6	5:44	3.5	18:22	- 0.6
18	Sa.	10:52	8.4			5:19	3.2	17:52	-0.5	18	Tu.	1:10	7.9	12:14	8.6	6:36	3.3	19:13	-0.4
19	\$.	0:35	7.9	11:34	8.5	6:04	3.3	18:38	-0.6	19	w.	2:01	7.8	13:12	8.4	7:29	3.1	20:05	0.1
20	IVIE.	1:27	7.8	12:19	8.4	6:50	3.5	19:26	0.4	20	Th.	2:51	7.7	14:14	8.0	8:24	3.0	20:58	0.7
21	Tu.	2:21	7.6	13:08	8.2	7:38	3.6	20:16	0.0	21	F.	3:40	7.6	15:22	7.6	9:22	2.8	21:52	.1.4
22	w.	3:16	7.4	14:04	7.8	8:33	3.7	21:11	0.6	22	Sa.	4:28	7.5	16:36	7:3	10:22	2.5	22:47	2.1
23	Th.	4:12	7:3	15:18	7.4	9:36	3.6	22:12	1.3	23	\$.	5:15	7:4	17:51	7.0	11:23	2.2	23:43	2.7
24	F.	5:09	7.2	16:46	7.1	10:46	3.4	23:17	1.8	24	IVIE.	6:02	7:3	19:01	6.9			12:24	1.8
25	Sa.	6:04	7.1	18:08	7.0	11:57	3.0			25	Tu.	6:48	7:3	20:06	6.8	0:40	3.2	13:24	1.5
26	5.	6:55	7.2	19:19	7:1	0:23	2.3	13:00	2.4	26	w.	7:33	7.3	21:06	6.8	1:36	3.6	14:22	1.2
27	NE.	7:38	7.3	20:24	7.2	1:22	2.6	13:58	1.8	27	Th.	8:16	7.4	22:02	6.8	2:29	3.9	15:16	0.9
28	Tu.	8:18	7.4	21:25	7.3	2:16	2.9	14:51	1.2	28	F.	8:58	7.4	22:54	6.9	3:19	4.0	16:05	0.7
29	w.	8:57	7.5	22:20	7:3	3:06	3.2	15:40	0.7	29	Sa.	9:39	7.5	23:43	6.9	4:08	4.1	16:51	0.6
30	Th.	9:35	7.6	23:09	7:3	3:52	3.4	16:27	0.4	30	10:21	7.5			4:56	4.1	17:33	0.6
31	F.	10:12	7.6	23:54	7.2	4:35	3.6	17:10	0.3										

The Height is measured from the level of the lower Low Water at Spring Tides, as ascertained by the tide gauge observations themselves.

The nature of the TIDAL STREAMS in Northumberland strait is explained on page 10.

=	====																		
1		:			JU	LY.			i						AUG	UST.			
٠.		Ни	GH V	VATER		L	ow V	VATER.				H	GH V	VATER		L	ow V	VATER	
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
		н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.
1	Mr.	0:28	7.0	11:04	7.5	5;42	4.1	18:13	0.7	1	Th.	1:09	7.2	12:28	7.5	6:39	3.4	19:06	1.5
2	Tu.	1:08	7.0	11:48	7.4	6:25	4.0	18:51	1.0	2	F.	1:37	7.2	13:09	7:3	7:16	3.2	19:37	1.9
3	w.	1:46	6.9	12:31	7.2	7:04	4.0	19:27	1.3	3	Sa.	2:01	7.1	13:69	7.1	7:52	3.0	20:06	2.3
4	Th.	2:21	6.8	13:14	7.0	7:42	3.9	20:01	1.7	4	5.	2:22	7.1	14:32	6.8	8:29	2.8	20:34	2.8
5	F.	2:52	6.7	13:58	6.8	8:21	3.8	20:34	2.1	5	M.	2:42	7.2	15:21	6.2	9:07	2.5	21:04	3.3
6	Sa.	3:20	6.7	14:44	6.6	9:01	3.6	21:07	2.5	6	Tu.	3:04	7.3	16:20	6:3	9:47	2.3	21:40	3.7
7	5.	3:47	6.7	15:36	6.3	9:43	3.3	21:42	3.0	7	w.	3:32	7.5	17:36	6.1	10:39	2.1	22:29	4.2
8	M.	4:14	6.8	16:43	6.1	10:30	2.9	22:22	3.3	8	Th.	4:16	7.6	18:56	6.1	11:50	1.8	23:34	4.5
9	Tu.	4:43	7.1	18:01	6.1	11:26	2.5	23:19	3.7	9	F.	5:18	7.7	20:10	6.3		.	13:03	1:5
10	w.	5:19	7.3	19:18	6.2			12:27	2.0	10	Sa.	6:37	7.8	21:12	6.7	1:03	4.7	14:12	1.1
11	Th.	6:10	7.6	20:26	6.5	0.24	4.0	13:30	1.4	11	5.	7:57	8.0	22:09	7:1	2:19	4.5	15:14	0.7
12	F.	7:10	7.8	21:28	6.8	1:31	4.2	14:32	0.8	12	ME.	9:16	8.3	23:00	7.6	3:26	4.0	16:13	0.4
13	Sa.	8:14	8.1	22:24	7.2	2:38	4.2	15:32	0.3	13	Tu.	10:22	8.6	23:43	7:9	4:26	3.3	17:07	0.5
14	.5.	9:19	8.3	23:15	7.5	3:42	4.0	16:29	-0.1	14	w.	11:19	8.8			5:20	2.6	17:56	0.5
15	MI.	10:22	8.6			4:40	3.6	17:23	-0.4	15	Th.	0:21	8.1	12:12	8.9	6:07	2.0	18:41	0.5
16	Tu.	0:05	7.8	11:22	8.7	5:34	3.2	18:14	0.4	16	F.	0:59	8.2	13:04	8.8	6;53	1.5	19:23	1.0
17	w.	0:53	8.0	12:19	8.8	6:26	2.8	19:02	-0.2	17	Sa.	1:38	8.2	13:56	8.4	7:39	1.2	20:04	1 6
18	Th.	1:38	8.1	13:15	8.6	7:16	214	19:48	0.3	18	5.	2:15	8.1	14:49	7.9	8:26	1.2	20:44	2.4
19	F.	2:22	8.0	14:11	8.3	8:06	2.1	20:33	1.0	19	DE.	2:51	7:9	15:45	7:3	9:16	1.3	21:25	3.1
20	Sa.	3:05	7.9	15:09	7.8	8:57	1.9	21:20	1.8	20	Tu.	3:28	7.7	16:47	6.8	10:08	1.5	22:11	3.8
21	\$.	3:47	7.7	16:12	7.4	9:49	1.8	22:09	2.6	21	w.	4:07	7:5,	17:57	6.4	11:05	1.8	23:06	4.3
22	IVII.	4:29	7.5	17:20	6.9	10:44	1.7	23:02	3.3	22	Th.	4.51	7:3	19:14	6.2			12:08	2:0
23	Tu.	5:12	7.4	18:32	6.6	11:43	1.7	23:58	3.9	23	F.	5:50	7.1	20:24	6.3	0:09	4.7	13:18	2.0
24	w.	5:56	7:3	19:45	6.4			12:48	1.6	24	Sa.	7:03	7.0	21:27	6.2	1:20	4.8	14:26	1.9
25	Th.	6:42	7.2	20:54	6.5	0:56	4.2	13:52	1.5	25	5.	8:10	7.1	22:18	6.8	2:30	4.6	15:22	1.7
26	F.	7:32	7.3	21:52	6.6	1:55	4.5	14:52	1.3	26	M.	9:09	7.3	22:56	7.1	3:30	4.3	16:09	1.6
27	Sa.	8:24	7.3	22:41	6.8	2:54	4.5	15:47	1.2	27	Tu.	10:03	7.5	23:29	7:3	4:18	3.9	16:49	1.4
28	5.	9:17	7.4	23:23	7.0	3:50	4.1	16:35	1.1	28	w.	10:53	7.6			5:01	3.4	17:27	1.4
29	Mr.	10:10	7.4			4:39	4.2	17:16	1.0	29	Th.	0:00	7.4	11:38	7.7	5:40	2.9	18:02	1.5
30	Tu.	0:01	7:1	11:01	7.5	5:22	3 9	17:55	1.0	30	F.	0:28	7.5	12:20	7.7	6:17	2.5	18:34	1.8
31	w.	0:37	7.2	11:46	7.5	6:01	3.6	18:32	1.2	31	Sa.	0:52	7:5	13:00	7.6	6:52	2.2	19:05	2.2
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The HEIGHT is measured from the level of the lower Low Water at Spring Tides, as ascertained by the tide gauge observations themselves.

The nature of the Tidal Streams in Northumberland strait is explained on page 10.

				SE	PTE	MBEF	.	. ,	1	-				. 0	сто	BER.						
a l		H	GH 1	VATER	 R.	Lo	w V	VATER.		re.	·,	H	igh '	WATER		L	ow V	VATER				
Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Date.	Day.	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.			
	}	н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н.` м.	FT.	н. м.		н. м.				
1	5.	1:13	7.5	13:40	7.4	7:26	2.0	19:35	2.7	1	Tu.	0:45	8.0	14:15	7.3	7:31	1.0		3.7			
2	ME.	1:33	7.5	14:22	7.1	8:00	1.8	20:05	3.2	2	w.	1:10	8.0	15:04	7.0	8:10	1.0		4.1			
3	Tu.	1:52	7.6	15:09	6.8	8:36	1.7	20:36	3.7	3	Th.	1:40	8.0	16:05	6.7	8:58	1.3		4.5			
4	w.	2:13	7.7	16:09	6.4	9:17	1.7	21:11	4.2	4	F.	2:24	7.8	17:26	6.5	10:00	1.6		4.8			
.5	Th.	2:46	7:8	17:26	6.2	10:12	1.8	22:08	4.6	5	Sa.	3:35	7.5		6.5	11:16	1.9		4.8			
6	IF∙	3:41	7.7	18:46	6.2	11:28	1.8	23:32	4.9	6	\$.	5:09	7.3	19:38	6.8			12:32	2.0			
.7	Sa.	5:00	7.6	20:00	6.5			12:46	1.7	7	M.	6:49	7.3		7.1	0:57		13:42	2.0			
.8	5.	6:35	7.6	21:00	6.8	0:58	4.8	14:00	1.6	8	Tu.	8:10	7.7	21:16	7.4	2:05		14:45	1.9			
9	WE.	8:05	7.8	21:51	7.2	2 13	4.2	15:04	1.3	9	w.	9:18	8.1	21:56	7.7	3:04		15:38	1.8			
10	Tu.	9:20	8.2	22:33	7.6	3:18	3.5	16:01	1.1	10	Th.	10:16	8.4	22:32	7.9	3:56	1.8		1.9			
11	w.	10:21	8.6	23:11	7.9	4:14	2.6	16:51	1.0	11	F.	11:08	8.6	23:05	8.1	4:45		17:10	2.1			
12	Th.	11:15	8.8	23:47	8.1	5:04	1.8	17:36	1.1	12	. Sa.	11:56	8.5	23:37	8.1	5:30		17:51	2.4			
13	F.			12:06	8.9	5.21	1.1	18:18	1.4	13	5.		****	12:42	8.3	6:12	0.3		2.7			
14	Sa.	0:22	8.2	12:55	8.7	6:36	0.7	18:58	1.9	14	IVII.	.0:08	8.1	13:27	7.9	6:53	0.3	•	3.2			
15	\$.	0:55	8.2	13:43	8.3	7:20	0.6	19:36	2.4	15	Tu.	0:39	8.0	14:13	7.4	7:33		19:42	0-			
16	M.	1:27	8.1	14:33	7.7	8:03	0.7	20:13	3.1	16	w.	1:11	7.9		6.9	8:14		20:19				
17	Tu.	1:58	7.9	15:25	7.1	8:47	1.1	20:51	3.7	17	Th.	1:44		15:50	6.5	8:56		20:58	4.5			
18	w.	2:30	7.7	16:20	6.6		1.5		4.2	18	F.	2:20	·	16:49	6.3	9:44	2.1					
19	Th.	3:07	7.5	17:24	6.3		1 '9		4.7	19	Sa.	3:11		17:56	6.2			23:01	4.8			
20	F.	3:53		18:34	6.1	11:23	2.3		4.9	20	\$.	4:29		19:00	6.4	11:55	2.7		۰۰۰۰			
21	Sa.	5:07						12:32	2.5	21	WI.	6:03		19:50	6.6			13:00				
22	\$.	6:33							2.4	22	Tu.	7:22	6.7	20:32	6.9			13:58				
23	IVII.	7:46							2.3	23	W.	8:30	7:0	l ſ	7.2		3.4	1	2.7			
24	Tu.	8:50							2.1	24	Th.	9:26	7·3		7.5		2.7					
25	w.	9:44	7.5							25	F.	10:14	7:6	1	7.7	3:54	2.0					
26	Th.	10:35		23:06					2.0	26	Sa.	11:00	7.8		7.9		1.4					
27	F.	11:22							2.1	27	Ş.	11:45	7.9		8.1	5:12		17:26				
28	Sa.	12:04	8.0	,						28	IVI.	12:30	7.9		8.2		0.5					
29	\$.			12:46					2.7	29	Tu.	0.10	0.9	13:17				18:45				
30	NT.	0:21	7 9	13:30	7.6	6:55	1.1	19:07	3.2	30	w.	0:10		14:08	7.5			19:28				
										31	Th.	0:47	8.2	15:05	7.2	7:59	0.9	20:18	4.2			

The nature of the TIDAL STREAMS in Northumberland strait is explained on page 10.

The Height is measured from the level of the lower Low Water at Spring Tides, as ascertained by the tide gauge observations themselves.

2 Sa. 2:39 77 17:08 69 9:55 1 4 22:20 4 4 2 M. 4:11 74 17:31 73 10:40 1 9 23:17 3 S. 3:56 73 18:07 69 11:03 1 9 23:30 4 1 3 Tu, 5:35 72 18:20 73 11:46 2 4					NO	VE	MBER	, Vo		ĺ					D	ECE	EMBE	R.		
H. M. FT. H. M	و ا		HI	GH V	VATER		I	ow I	VATER		e.		Н	IGH \	WATER		L	ow V	VATER.	
1 F. 1:37 80 16:07 70 8:54 09 21:16 44 1 1 5. 2:49 77 16:40 73 9:40 13 22:11 2 Sa. 2:39 77 17:08 69 9:55 14 22:20 44 2 M. 4:11 74 17:31 73 10:40 19 23:17 3 S. 3:56 73 18:07 69 11:03 19 23:30 41 3 Tu. 5:36 72 18:20 73 11:46 24 4 M. 5:28 71 19:01 71 12:14 2:2 4 W. 6:50 72 19:66 74 0:22 25 12:48 5 Tu. 6:58 73 19:51 73 0:43 34 13:23 2:4 5 Th. 7:50 73 19:49 76 1:23 19 18:46 6 W. 8:11 76 20:38 75 149 2:6 14:22 2:5 6 F. 9:00 74 20:30 76 2:20 13 14:40 7 Th. 9:16 78 21:20 77 2:46 18 15:13 2:6 7 Sa. 9:56 74 21:10 77 3:14 03 15:30 8 F. 10:11 80 21:57 78 3:38 11 16:01 28 8 S. 10:48 74 21:51 77 4:05 05 16:16 9 Sa. 11:02 80 2:37 79 4:26 06 16:46 30 9 M. 11:36 74 2:31 77 4:05 05 16:16 10 S. 11:50 79 23:04 80 5:10 03 17:47 3:3 10 Tu. 12:21 73 23:09 77 5:35 04 17:48 11 M. 12:35 77 23:35 79 5:52 02 18:06 3:5 11 W. 13:04 71 23:46 76 6:16 05 18:24 12 Tu 13:18 74 6:33 03 18:44 3:8 12 Th 13:45 70 6:55 08 19:04 13 W. 0:07 78 14:96 68 75:2 11 19:59 43 14 Sa. 1:08 72 15:04 67 8:09 16 20:28 15 F. 1:14 74 15:34 6:5 8:32 16 20:40 4:5 15 5. 1:53 6:9 16:19 6:6 9:27 2:5 22:05 17 S. 2:49 6:7 17:15 6:4 10:01 2:5 22:37 44 17 Tu. 3:44 6:4 16:56 6:7 10:10 2:9 22:59 18 M. 4:06 6:4 18:05 6:5 10:56 28 23:46 41 18 W. 5:00 6:2 17:33 6:8 10:58 32 23:55 19 Tu. 5:32 6:3 18:49 6:7 11:54 3:1 19 Th. 6:14 6:2 18:11 70 11:52 3:5 20 W. 6:51 6:4 19:30 70 0:49 3:6 12:55 3:2 20 F. 7:20 6:3 18:11 70 11:52 3:5 21 Th. 7:59 6:7 22:15 8:1 4:03 0:8 16:12 3:5 4 Th. 10:11 77 22:15 8:4 4:10 13:45 70 16:33 22 F. 8:57 70 20:44 7:5 2:32 2:2 14:46 3:3 21 Sa. 8:21 6:5 19:34 7:6 1:44 19 13:45 2 23 Sa. 9:50 7:2 21:19 7:8 3:18 1:5 15:30 3:4 33 M. 10:17 71 21:11 8:1 70 11:52 3:5 24 S. 10:41 7:5 21:55 8:1 4:03 0:8 16:12 3:5 24 Th. 11:11 74 22:03 8:4 4:19 0:1 16:31 2:44 19 13:45 2 5. 10:41 77 22:58 8:6 5:11-02 17:23 3:6 12:14 2:4 1. 13:15 70 15:34 79 6:52-03 19:05 22:14 19:05 3:4 11 11:11 74 22:03 8:4 4:19 0:1 16:31 2:44 19 13:45 2 5. 10:41 70 11:52 79 8:31 8:4 6:6 6:06-07 19:01 11:52 79 8:35 6 5 10:50 3:6 6:06 0:07 17:3	Dat	Day	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.	Dat	Day	Time.	H't.	Time.	H't.	Time.	H't.	Time.	H't.
2 Sa. 2.39 77 17:08 6-9 9.55 1-4 22:20 4-4			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.			н. м.	FT.	н. м.	FT.	н. м.	FT.	н. м.	FT.
3	1	F.	1:37	8.0	16:07	7.0	8:54	0.9	21:16	4.4	1	5.	2:49	7.7	16:40	7.3	9:40	1.3	22:11	3.5
4 M. 5:28 7¹ 19:01 7¹	2	Sa.	2:39	7.7	17:08	6.9	9:55	1.4	22:20	4.4	2	M.	4:11	7.4	17:31	7:3	10:40	1.9	23:17	3.0
5 Tu. 6.58 73 19:51 73 0:43 3'4 13:23 2'4 5 Th. 7:59 73 19:49 75 1:23 1'9 13:46 6 W. 8:11 76 20:38 75 1:49 2'6 14:22 2'5 6 F. 9:00 74 20:30 76 2:20 1'3 14:40 7 Th. 9:16 78 21:20 77 2:46 1'8 15:13 2'6 7 Sa. 9:56 74 21:10 77 3:14 0'8 15:30 8 F. 10:11 8'0 21:57 7'8 3:38 1'1 16:01 2'8 8 5. 10:48 7'4 21:51 7'7 4:05 0'5 16:16 9 Sa. 11:02 8'0 22:32 7'9 4:26 0'6 16:46 3'0 9 M. 11:36 7'4 22:31 7'7 4:52 0'3 17:00 10 5. 11:50 7'9 23:04 8'0 5:10 0'3 17:27 3'3 10 Tu. 12:21 7'3 23:09 7'7 5:35 0'4 17:48 11 M. 12:35 7'7 23:35 7'9 5:52 0'2 18:06 3'5 11 W. 13:04 7'1 23:46 7'6 6:16 0'5 18:24 12 Tu 13:18 7'4 6:33 0'3 18:44 3'8 12 Th 13:45 7'0 6:55 0'8 19:04 13 W. 0:07 7'8 14:06 6'8 7:52 1'1 19:59 4'3 14 Sa. 1:08 7'2 15:04 6'7 8'09 1'6 20:28 15 F. 1:14 7'4 15:34 6'5 8:32 1'6 20:40 4'5 15 5. 1:53 6'9 15:42 6'6 8:47 2'1 21:15 16 Sa. 1:54 7! 16:24 6'4 9:14 2'1 21:32 4'5 16 M. 2:43 6'6 16:19 6'6 9:27 2'5 22:05 17 5. 2:49 6'7 17:15 6'4 10:01 2'5 22:37 4'4 17 Tu. 3:44 6'4 16:56 6'7 10:10 2'9 22:59 18 M. 4:06 6'4 18:05 6'5 10:56 2'8 23:46 4'1 18 W. 5:00 6'2 17:33 6'8 10:58 3'2 23:55 19 Tu. 5:32 6'3 18:49 6'7 11:54 3'1 19 Th. 6:14 6'2 18:11 7'0 11:52 3'5 20 W. 6:51 6'4 19:30 7'0 0:49 3'6 12:55 3'2 20 F. 7:20 6'3 18:51 7'3 6:51 2'5 12:48 21 Th. 7:59 6'7 20:08 7'2 1:44 2'9 13:54 3'3 21 Sa. 8:21 6'5 19:34 7'6 1:44 1'9 13:45 22 F. 8:57 7'0 20:44 7'5 2:32 2'2 14:46 3'3 22 5. 9:20 6'8 20:21 7'9 2:36 1'2 14:42 23 Sa. 9:50 7'2 21:19 7'8 3:18 1'5 15:30 3'4 23 M. 10:17 7'1 21:11 8'1 3:27 0'6 15:38 24 5. 10:41 7'5 21:55 8'1 4:03 0'8 16:12 3'5 24 Tu. 11:11 7'4 22:03 8'4 4:19 0'1 16:31 25 M. 11:20 7'7 22:32 8'3 44'7 0'3 16:53 3'6 25 W. 12:04 7'7 22:58 8'6 5:11-0'2 17:23 26 Tu. 12:17 7'8 23:15 8'4 5:31-0'1 17:35 3'6 26 Th. 12:55 7'8 23:64 8'6 6:02-0'4 18:14 27 W. 13:07 7'8 23:54 8'5 6:16-0'2 18:20 3'7 27 F 13:43 7'9 6:52-0'3 19:05 28 Th 13:59 7'7 7:03-0'1 19:12 3'8 28 Sa. 0:51 8'5 14:28 7'9 7:41 0'1 19:57 29 F. 0:44 8'3 14:54 7'6 7:52 0'2 20:08 3'8 29 5. 1:50 8'3 15:12 7'8 8:30 0'6 20:51	3	\$.	3:56	7.3	18:07	6.9	11:03	1.9	23:30	4.1	3	Tu.	5:35	7.2	18:20	7.3	11:46	2.4		
6 W. 8:11 7 6 20:38 7 5 1:49 2 6 14:22 2 5 6 F. 9:00 7 4 20:30 7 6 2:20 1 3 14:40 7 Th. 9:16 7 8 21:20 7 7 2:46 1 8 15:13 2 6 7 8 a. 9:56 7 4 21:10 7 7 3:14 0 8 15:30 8 F. 10:11 8 0 21:57 7 8 3:38 1 1 16:01 2 8 8 5. 10:48 7 4 21:51 7 7 4:05 0 5 16:16 9 8a. 11:02 8 0 22:32 7 9 4:26 0 6 16:46 3 0 9 M. 11:36 7 4 22:31 7 7 4:52 0 3 17:00 10 5. 11:50 7 9 23:04 8 0 5:10 0 3 17:27 3 3 10 Tu. 12:21 7 3 23:09 7 7 5:35 0 4 17:48 11 M. 12:35 7 7 23:35 7 9 5:52 0 2 18:06 3 5 11 W. 13:04 7 1 23:46 7 6 6:16 0 5 18:24 12 Tu	4	W.	5:28	7.1	19:01	7.1			12:14	2.2	4	w.	6:50	7.2	19:06	7.4	0:22	2.5	12:48	2.8
7 Th. 9:16 78 21:20 77 2:46 18 15:13 2°6 7 Sa. 9:56 74 21:10 77 3:14 08 15:30 8 F. 10:11 80 21:57 78 3:38 11 16:01 28 8 5. 10:48 74 21:51 77 4:05 05 16:16 9 Sa. 11:50 79 23:04 80 5:10 03 17:27 3:3 10 Tu. 11:36 74 22:31 77 4:52 03 17:43 11 III. 12:35 77 23:35 79 5:52 02:1 18:06 35 11 I.12:1 73 23:09 77 5:35 04 17:43 12 Tu. 13:18 74 6:33 03 18:44 38 12 Th. 13:45 70 6:55 08 19:04 13 <	5	Tu.	6:58	7.3	19:51	7.3	0:43	3.4	13:23	2.4	5	Th.	7:59	7:3	19:49	7.5	1:23	1.9	13:46	3.1
8 F. 10:11 8·0 21:57 7·8 3:38 1·1 16:01 2·8 8 5. 10:48 7·4 21:51 7·7 4:05 0·5 16:16 9 Sa. 11:02 8·0 22:32 7·9 4:26 0·6 16:46 3·0 9 M. 11:36 7·4 22:31 7·7 4:52 0·3 17:00 10 5. 11:50 7·9 23:04 8·0 5:10 0·3 17:27 3·3 10 Tu. 12:21 7·3 23:09 7·7 5:35 0·4 17:43 11 M. 12:35 7·7 23:35 7·9 5:52 0·2 18:06 3·5 11 W. 13:04 7·1 23:46 7·6 6:16 0·5 18:24 12 Tu 13:18 7·4 6:33 0·3 18:44 3·8 12 Th 13:45 7·0 6:55 0·8 19:04 13 W. 0:07 7·8 14:01 7·1 7:13 0·6 19:21 4·1 13 F. 0:25 7·4 14:25 6·8 7:32 1·2 19:45 14 Th. 0:40 7·7 14:46 6·8 7:52 1·1 19:59 4·3 14 Sa. 1:08 7·2 15:04 6·7 8·09 1·6 20:28 15 F. 1:14 7·4 15:34 6·5 8:32 1·6 20:40 4·5 15 5. 1:53 6·9 15:42 6·6 8·47 2·1 21:15 16 Sa. 1:54 7·1 16:24 6·4 9:14 2·1 21:32 4·5 16 M. 2:43 6·6 16:19 6·6 9:27 2·5 22:05 17 5. 2:49 6·7 17:15 6·4 10:01 2·5 22:37 4·4 17 Tu. 3:44 6·4 16:56 6·7 10:10 2·9 22:59 18 M. 4:06 6·4 18:05 6·5 10:56 2·8 23:46 4·1 18 W. 5:00 6·2 17:33 6·8 10:58 3·2 23:55 19 Tu. 5:32 6·3 18:49 6·7 11:54 3·1 19 Th. 6:14 6·2 18:11 7·0 11:52 3·5 20 W. 6:51 6·4 19:30 7·0 0:49 3·6 12:55 3·2 20 F. 7:20 6·3 18:51 7·3 0:51 2·5 12:48 21 Th. 7:59 6·7 20:08 7·2 1:44 2·9 13:54 3·3 21 Sa. 8:21 6·5 19:34 7·6 1:44 1·9 13:45 22 F. 8:57 7·0 20:44 7·5 2:32 2·2 14:46 3·3 2 2 5. 9:20 6·8 20:21 7·9 2:36 1·2 14:42 23 Sa. 9:50 7·2 21:19 7·8 3:18 1·5 15:30 3·4 23 M. 10:17 7·1 21:11 8·1 3:27 0·6 15:38 24 5. 10:41 7·5 21:55 8·1 4:03 0·8 16:12 3·5 24 Tu. 11:17 7·4 22:03 8·4 4:19 0·1 16:31 25 M. 11:29 7·7 22:32 8·3 4:47 0·3 16:53 3·6 25 W. 12:04 7·7 22:58 8·6 5:11 0·2 17:23 26 Tu. 12:17 7·8 23:11 8·4 5:31 0·1 17:35 3·6 26 Th. 12:55 7·8 23:54 8·6 6:02 0·4 18:14 27 W. 13:07 7·8 23:14 8·5 6:16 0·2 18:20 3·7 17. 7:03 0·1 19:12 3·8 28 Sa. 0:51 8·5 14:28 7·9 7:41 0·1 19:57 29 F. 0:44 8·3 14:54 7·6 7:52 0·2 20:08 3·8 29 5. 1:50 8·3 15:12 7·8 8:30 0·6 20:51 30 Sa. 1:41 8·1 15:48 7·4 8:44 0·7 21:08 3·7 30 M. 2:54 7·9 15:57 7·6 9:20 1·3 21:49	6	w.	8:11	7.6	20:38	7.5	1:49	2.6	14:22	2.5	6	F.	9:00	7.4	20:30	7.6	2:20	1.3	14:40	3.4
9 Sa. 11:02 8·0 22:32 7·9 4:26 0·6 16:46 3·0 8 Mr. 11:36 7·4 22:31 7·7 4:52 0·3 17:00 5. 11:50 7·9 23:04 8·0 5:10 0·3 17:27 3·3 10 Tm. 12:21 7·3 23:09 7·7 5:35 0·4 17:43 11 Mr. 12:35 7·7 23:35 7·9 5:52 0·2 18:06 3·5 11 W. 13:04 7·1 23:46 7·6 6:16 0·5 18:24 12 Tm	7	Th.	9:16	7.8	21:20	7.7	2:46	1.8	15:13	2.6	7	Sa.	9:56	7.4	21:10	7.7	3:14	0.8	15:30	3.6
10	8	F.	10:11	8.0	21:57	7.8	3:38	1.1	16:01	2.8	8	5.	10:48	7.4	21:51	7.7	4:05	0.5	16:16	3.8
11 M. 12:35 7.7 23:35 7.9 5:52 0.2 18:06 3.5 11 W. 13:04 7.1 23:46 7.6 6:16 0.5 18:24 12 Tu.	9	Sa.	11:02	8.0	22:32	7.9	4:26	0.6	16:46	3.0	9	WE.	11:36	7.4	22:31	7.7	4:52	0.3	17:00	3.9
12 Tu.	10	\$.	11:50	7.9	23:04	8.0	5:10	0.3	17:27	3.3	10	Tu.	12:21	7.3	23:09	7.7	5:35	0.4	17:43	4.0
13 W. 0:07 7*8 14:01 7*1 7:13 0*6 19:21 4*1 13 F. 0:25 7*4 14:25 6*8 7:32 1*2 19:45 14 Th. 0:40 7*7 14:46 6*8 7:52 1*1 19:59 4*3 14 Sa. 1:08 7*2 15:04 6*7 8:09 1*6 20:28 15 F. 1:14 7*4 15:34 6*5 8:32 1*6 20:40 4*5 15 5. 1:53 6*9 15:42 6*6 8:47 2*1 21:15 16 Sa. 1:54 7:1 16:24 6*4 9:14 2*1 21:32 4*5 16 M. 2:43 6*6 16:19 6*6 9:27 2*5 22:05 17 5. 2:49 6*7 17:15 6*4 10:01 2*5 22:37 4*4 17 Tu. 3:44 6*4 16:56 6*7 10:10 2*9 22:59 18 M. 4:06 6*4 18:05 6*5 10:56 2*8 23:46 4*1 18 W. 5:00 6*2 17:33 6*8 10:58 3*2 23:55 19 Tu. 5:32 6*3 18:49 6*7 11:54 3*1 19 Th. 6:14 6*2 18:11 7*0 11:52 3*5 20 W. 6:51 6*4 19:30 7*0 0:49 3*6 12:55 3*2 2*0 F. 7:20 6*3 18:51 7*3 0:51 2*5 12:48 21 Th. 7:59 6*7 20:08 7*2 1:44 2*9 13:54 3*3 2*1 Sa. 8:21 6*5 19:34 7*6 1:44 1*9 13:45 22 F. 8:57 7*0 20:44 7*5 2:32 2*2 14:46 3*3 2*2 5. 9:20 6*8 20:21 7*9 2:36 1*2 14:42 23 Sa. 9:50 7*2 21:19 7*8 3:18 1*5 15:30 3*4 23 M. 10:17 7*1 21:11 8*1 3:27 0*6 15:38 24 5. 10:41 7*5 21:55 8*1 4:03 0*8 16:12 3*5 24 Tu. 11:11 7*4 22:03 8*4 4:19 0*1 16:31 25 M. 11:29 7*7 22:32 8*3 4:47 0*3 16:53 3*6 25 W. 12:04 7*7 22:58 8*6 5:11-0*2 17:23 26 Tu. 12:17 7*8 23:11 8*4 5:31-0*1 17:35 3*6 26 Th. 12:55 7*8 23:54 8*6 6:02-0*4 18:14 27 W. 13:07 7*8 23:54 8*5 6:16-0*2 18:20 3*7 27 F	11	IVIE.	12:35	7.7	23:35	7.9	5:52	0.2	18:06	3.2	11	w.	13:04	7.1	23:46	7.6	6:16	0.2	18:24	4.1
14 Th. 0:40 7·7 14:46 6·8 7:52 1·1 19:59 4·3 14 Sa. 1:08 7·2 15:04 6·7 8·09 1·6 20:28 15 F. 1:14 7·4 15:34 6·5 8:32 1·6 20:40 4·5 15 5. 1:53 6·9 15:42 6·6 8:47 2·1 21:15 16 Sa. 1:54 7·1 16:24 6·4 9:14 2·1 21:32 4·5 16 M. 2:43 6·6 16:19 6·6 9:27 2·5 22:59 18 M. 4:06 6·4 18:05 6·5 10:56 2·8 23:46 4·1 18 W. 5:00 6·2 17:33 6·8 10:58 3·2 23:55 19 Tu. 5:32 6·3 18:49 6·7 11:54 3·1	12	Tu.			13:18	7.4	6:33	0.3	18:44	3.8	12	Th.			13:45	7.0	6:55	0.8	19:04	4:1
15 F. 1:14 7'4 15:34 6'5 8:32 1'6 20:40 4'5 15 5. 1:53 6'9 15:42 6'6 8:47 2'1 21:15 16 Sa. 1:54 7:1 16:24 6'4 9:14 2'1 21:32 4'5 16 M. 2:43 6'6 16:19 6'6 9:27 2'5 22:05 17 S. 2:49 6'7 17:15 6'4 10:01 2'5 22:37 4'4 17 Tu. 3:44 6'4 16:56 6'7 10:10 2'9 22:59 18 M. 4:06 6'4 18:05 6'5 10:56 2'8 23:46 4'1 18 W. 5:00 6'2 17:33 6'8 10:58 3'2 23:55 19 Tu. 5:32 6'3 18:49 6'7 11:54 3'1	13	w.	0:07	7.8	14:01	7.1	7:13	0.6	19:21	4.1	13	F.	0:25	7.4	14:25	6.8	7:32	1.2	19:45	4.1
16 Sa. 1:54 7:1 16:24 6:4 9:14 2:1 21:32 4:5 16 M. 2:43 6:6 16:19 6:6 9:27 2:5 22:05 17 5. 2:49 6:7 17:15 6:4 10:01 2:5 22:37 4:4 17 Tu. 3:44 6:4 16:56 6:7 10:10 2:9 22:59 18 M. 4:06 6:4 18:05 6:5 10:56 2:8 23:46 4:1 18 W. 5:00 6:2 17:33 6:8 10:58 3:2 23:55 19 Tu. 5:32 6:3 18:49 6:7 11:54 3:1	14	Th.	0:40	7.7	14:46	6.8	7:52	1.1	19:59	4.3	14	Sa.	1:08	7.2	15:04	6.7	8.09	1.6	20:28	4.1
17 5. 2:49 6·7 17:15 6·4 10:01 2·5 22:37 4·4 17 Tu. 3:44 6·4 16:56 6·7 10:10 2·9 22:59 18 M. 4:06 6·4 18:05 6·5 10:56 2·8 23:46 4·1 18 W. 5:00 6·2 17:33 6·8 10:58 3·2 23:55 19 Tu. 5:32 6·3 18:49 6·7 11:54 3·1 19 Th. 6:14 6·2 18:11 7·0 11:52 3·5 20 W. 6:51 6·4 19:30 7·0 0:49 3·6 12:55 3·2 20 F. 7:20 6·3 18:51 7·3 0:51 2·5 12:48 21 Th. 7:59 6·7 20:08 7·2 1:44 2·9 13:54 3·3 21 Sa. 8:21 6·5 19:34 7·6 1:44 1·9 13:45 22 F. 8:57 7·0 20:44	15	F.	1:14	7.4	15:34	6.5	8:32	1.6	20:40	4.5	15	5.	1:53	6.9	15:42	6.6	8:47	2.1	21:15	4.0
18 M. 4:06 6:4 18:05 6:5 10:56 2:8 23:46 4:1 18 W. 5:00 6:2 17:33 6:8 10:58 3:2 23:55 19 Tu. 5:32 6:3 18:49 6:7 11:54 3:1 19 Th. 6:14 6:2 18:11 7:0 11:52 3:5 20 W. 6:51 6:4 19:30 7:0 0:49 3:6 12:55 3:2 20 F. 7:20 6:3 18:51 7:3 6:51 2:5 12:48 21 Th. 7:59 6:7 20:08 7:2 13:44 29 13:43 3:3 21 8a. 8:21 6:5 19:34 7:6 1:44 19 13:45 22 F. 8:57 7:0 20:44 7:5 2:32 2:2 14:46 3:3 22 5. 9:20 6:8 20:21 7:9 2:36 1:2 14:42 23 8a. 10:41 7:5 21:55	16	Sa.	1:54	7:1	16:24	6.4	9:14	2.1	21:32	4.5	16	WI.	2:43	6.6	16:19	6.6	9:27	2.5	22:05	3.8
19 Tu. 5:32 6:3 18:49 6:7 11:54 3:1	17	5.	2:49	6.7	17:15	6.4	10:01	2.5	22:37	4:4	17	Tu.	3:44	6.4	16:56	6-7	10:10	2.9	22:59	3.5
20 W. 6:51 6:4 19:30 7:0 0:49 3:6 12:55 3:2 20 F. 7:20 6:3 18:51 7:3 6:51 2:5 12:48 21 Th. 7:59 6:7 20:08 7:2 1:44 2:9 13:54 3:3 21 Sa. 8:21 6:5 19:34 7:6 1:44 1:9 13:45 22 F. 8:57 7:0 20:44 7:5 2:32 2:2 14:46 3:3 22 5. 9:20 6:8 20:21 7:9 2:36 1:2 14:42 23 Sa. 9:50 7:2 21:19 7:8 3:18 1:5 15:30 3:4 23 M. 10:17 7:1 21:11 8:1 3:27 0:6 15:38 24 5. 10:41 7:5 21:55 8:1 4:03 0:8 16:12 3:5 24 Tu. 11:11 7:4 22:03 8:4 4:19 0:1 16:31 25 M. 11:29 7:7 22:32 8:3 4:47 0:3 16:53 3:6 25 W. 12:04 7:7 22:58 8:6 5:11-0:2 17:23 26 Tu. 12:17 7:8 23:11 8:4 5:31-0:1 17:35 3:6 26 Th. 12:55 7:8 23:54 8:6 6:02-0:4 18:14 27 W. 13:07 7:8 23:54 8:5 6:16-0:2 18:20 3:7 27 F	18	IVII.	4:06	6.4	18:05	6.5	10:56	2.8	23:46	4.1	18	w.	5:00	6.2	17:33	6.8	10:58	3.2	23 :55	3.1
21 Th. 7:59 6:7 20:08 7:2 1:44 2:9 13:54 3:3 21 Sa. 8:21 6:5 19:34 7:6 1:44 1:9 13:45 22 F. 8:57 7:0 20:44 7:5 2:32 2:2 14:46 3:3 22 5. 9:20 6:8 20:21 7:9 2:36 1:2 14:42 23 Sa. 9:50 7:2 21:19 7:8 3:18 1:5 15:30 3:4 23 M. 10:17 7:1 21:11 8:1 3:27 0:6 15:38 24 5. 10:41 7:5 21:55 8:1 4:03 0:8 16:12 3:5 24 Tu. 11:11 7:4 22:03 8:4 4:19 0:1 16:31 25 M. 11:29 7:7 22:32 8:3 4:47 0:3 16:53 3:6 25 W. 12:04 7:7 22:58 8:6 5:11-0:2 17:23 26 Tu. 12:17 7:8 23:11 8:4 5:31-0:1 17:35 3:6 26 Th. 12:55 7:8 23:54 8:6 6:02-0:4 18:14 27 W. 13:07 7:8 23:54 8:5 6:16-0:2 18:20 3:7 27 F	19	Tu.	5:32	6.3	18:49	6.7	11:54	3.1			19	Th.	6:14	6.2	18:11	7.0	11:52	3.5		
22 F. 8:57 7.0 20:44 7.5 2:32 2:2 14:46 3:3 22 5. 9:20 6:8 20:21 7.9 2:36 1:2 14:42 23 Sa. 9:50 7:2 21:19 7.8 3:18 1.5 15:30 3:4 23 M. 10:17 7:1 21:11 8:1 3:27 0.6 15:38 24 5. 10:41 7.5 21:55 8:1 4:03 0.8 16:12 3:5 24 Tu. 11:11 7.4 22:03 8:4 4:19 0.1 16:31 25 M. 11:29 7.7 22:32 8:3 4:47 0.3 16:53 3:6 25 W. 12:04 7.7 22:58 8:6 5:11-0.2 17:23 26 Tu. 12:17 7.8 23:11 8:4 5:31-0.1 17:35 3:6 26 Th. 12:55 7.8 23:54 8:6 6:02-0.4 18:14 27 W. 13:07 7.8 23:54 8:5 6:16-0.2 18:20 3:7 27 F 13:43 7.9 6:52-0.3 19:05 28 Th 13:59 7.7 7:03-0.1 19:12 3:8 28 Sa. 0:51 8:5 14:28 7.9 7:41 0.1 19:57 29 F. 0:44 8:3 14:54 7:6 7:52 0.2 20:08 3:8 29 5. 1:50 8:3 15:12 7:8 8:30 0:6 20:51 30 Sa. 1:41 8:1 15:48 7:4 8:44 0.7 21:08 3:7 30 M. 2:54 7:9 15:57 7:6 9:20 1:3 21:49	20	w.	6:51	6.4	19:30	7.0	0:49	3.6	12:55	3.2	20	F.	7:20	6.3	18:51	7.3	0:51	2.5	12:48	3.7
23 Sa. 9:50 7·2 21:19 7·8 3:18 1·5 15:30 3·4 23 M. 10:17 7·1 21:11 8·1 3:27 0·6 15:38 24 5. 10:41 7·5 21:55 8·1 4:03 0·8 16:12 3·5 24 Tu. 11:11 7·4 22:03 8·4 4:19 0·1 16:31 25 M. 11:29 7·7 22:32 8·3 4:47 0·3 16:53 3·6 25 W. 12:04 7·7 22:58 8·6 5:11-0·2 17:23 26 Tu. 12:17 7·8 23:11 8·4 5:31-0·1 17:35 3·6 26 Th. 12:55 7·8 23:54 8·6 6:02-0·4 18:14 27 W. 13:07 7·8 23:54 8·5 6:16-0·2 18:20 3·7 27 F.	21	Th.	7:59	6.7	20:08	7.2	1:44	2 ·9	13:54	3.3	21	Sa.	8:21	6.2	19:34	7.6	1:44	1.9	13:45	3.9
24 5. 10:41 7:5 21:55 8:1 4:03 0:8 16:12 3:5 24 Tu. 11:11 7:4 22:03 8:4 4:19 0:1 16:31 25 M. 11:29 7:7 22:32 8:3 4:47 0:3 16:53 3:6 25 W. 12:04 7:7 22:58 8:6 5:11-0:2 17:23 26 Tu. 12:17 7:8 23:11 8:4 5:31-0:1 17:35 3:6 26 Th. 12:55 7:8 23:54 8:6 6:02-0:4 18:14 27 W. 13:07 7:8 23:54 8:5 6:16-0:2 18:20 3:7 27 F.	22	F.	8:57	7.0	20:44	7.5	2:32	2.2	14:46	3.3	22	5.	9:20	6.8	20:21	7.9	2:36	1.2	14:42	4.0
25 M. 11:29 7:7 22:32 8:3 4:47 0:3 16:53 3:6 25 W. 12:04 7:7 22:58 8:6 5:11-0:2 17:23 26 Tu. 12:17 7:8 23:11 8:4 5:31-0:1 17:35 3:6 26 Th. 12:55 7:8 23:54 8:6 6:02-0:4 18:14 27 W. 13:07 7:8 23:54 8:5 6:16-0:2 18:20 3:7 27 F	23	Sa.	9:50	7.2	21:19	7.8	3:18	1.5	15:30	3.4	23	W.	10:17	7.1	21:11	8.1	3:27	0.6	15:38	4.0
26 Tu. 12:17 7·8 23:11 8·4 5:31-0·1 17:35 3·6 26 Th. 12:55 7·8 23:54 8·6 6:02-0·4 18:14 27 W. 13:07 7·8 23:54 8·5 6:16-0·2 18:20 3·7 27 F. 13:43 7·9 6:52-0·3 19:05 28 Th.	24	5.	10:41	7.5	21:55	8.1	4:03	0.8	16:12	3.5	24	Tu.	11:11							
27 W. 13:07 7:8 23:54 8:5 6:16-0·2 18:20 3:7 27 F.	25	IVE.	11:29	7:7	22:32	8.3	4:47	0.3	16:53	3.6	25	w.	12:04	7.7	22:58	8.6	5:11	-0.2	17:23	3.7
28 Th	26	Tu.	12:17	7.8	23:11	8.4	5:31	0.1	17:35	3.6	26	Th.	12:55	7.8	23:54					
29 F. 0:44 8·3 14:54 7·6 7:52 0·2 20:08 3·8 29 5. 1:50 8·3 15:12 7·8 8:30 0·6 20:51 30 Sa. 1:41 8·1 15:48 7·4 8:44 0·7 21:08 3·7 30 M. 2:54 7·9 15:57 7·6 9:20 1·3 21:49	27	w.	13:07	7.8	23:54	8.5	6:16	6-0.2	18:20	3.7	27	F.								
30 Sa. 1:41 8·1 15:48 7·4 8:44 .0·7 21:08 3·7 30 M. 2:54 7·9 15:57 7·6 9:20 1·3 21:49	28	Th.			13:59	7.7	7:03	3-0.1	19:12	3.8	28	Sa.	0:51	8.5	14:28	7:9	7:41	0.1	19:57	
	29	F.	0:44	8:3	14:54	7.6	7:52	0.5	20:08	3.8	29	5.	1:50							
4 09 7 10 10 10 10 10 10 10 10 10 10 10 10 10	30	Sa.	1:41	8.1	15:48	7.4	8:44	.0.7	21:08	3.7	30	IVE.	2:54							
31 Tu, 4:03 7 0 10:43 7 3 10:12 2 0 22:30											31	Tu,	4:03	7.6	16:43	7.5	10:12	2.0	22:50	2.1

The Time used is Atlantic Standard, for the 60th Meridian, which is four hours slower than Greenwich Mean Time. It is counted from 0 to 24 hours, from midnight to midnight.

The Height is measured from the level of the lower Low Water at Spring Tides, as ascertained by the tide gauge observations themselves.

The nature of the Tidal Streams in Northumberland strait is explained on page 10.

=_			JANUAR	v						FEBRUA	PV		
			WATER.	Low V	VATER					WATER.	Low V	VATER	
Date.	Day.	Morn'g.	After'n.	Morn'g.		Moon.	Date.	Day.	Morn'g.		Morn'g.	After'n.	Moon.
1 2 3 4 4 5 6 6 7 8 9 10 11 12 11 14 11 5 11 6 17 11 8 19 20 22 22 24 22 5 22 6 26 7 28 8 29 30 31	M. Tu. W. Th. Sa. S. M. Tu. Yh. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. F. Sa. Su. W. Tu. W. Th. F. Su. Su. W. Tu. W. Th. F. Su. Su. W. Tu. W. Th. F. Su. Su. W. Tu. W. Tu. W. Tu. W. Tu. W. Tu. W.	H. M. 6 03 6 03 8 52 9 40 10 27 11 13 11 58 11 58 11 42 2 52 4 10 5 26 6 34 7 28 8 11 8 53 9 29 10 02 10 33 11 32 12 01 11 03 11 32 12 01 10 10 10 10 10 10 10 10 10 10 10 10	H. M. 17 43 18 36 19 25 20 12 21 00 21 51 42 44 23 40 12 43 13 29 14 16 15 53 16 43 17 33 18 22 20 32 11 21 49 22 27 11 21 49 22 27 13 07 13 48 14 40 15 56 18 04	H. M. 11 40 0 16 1 11 1 2 03 2 54 4 3 44 4 33 5 22 6 12 7 03 7 55 8 50 9 49 10 49 11 47 0 29 07 2 48 3 24 3 57 4 29 5 1 1 5 34 6 10 6 50 6 50 6 8 31 9 41 11 03 0 01	H. M. 12 35 13 26 14 15 15 03 15 52 16 42 17 33 18 24 19 18 20 15 21 17 22 28 23 32 12 41 13 30 14 12 14 49 15 58 16 32 17 44 18 26 19 15 20 16 21 26 22 42 12 14		1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 24 25 6 27 28 29	Th. F. Sa. M. Th. F. Sa. M. Th. F. Sa. M. Tu. W. Th. F. Sa. M. Tu. W. Th. F. Sa. M. Tu. W. Th.	H. M. 7 48 8 38 9 21 10 02 10 42 11 21 11 59 0 18 1 14 2 16 3 37 5 08 6 22 7 17 8 00 8 34 9 92 8 9 53 10 18 10 14 11 12 11 43 0 22 1 23 2 41 4 19 5 36 6 40	H. M. 19 05 20 02 20 54 21 45 22 35 26 12 36 15 32 16 42 21 7 53 18 52 19 41 20 22 21 01 21 38 22 14 22 51 23 32 12 20 13 04 14 03 15 14 16 35 17 55	H. M. 1 04 1 58 2 47 7 8 32 4 16 4 59 50 11 17 0 14 1 10 1 55 2 31 3 04 3 36 4 07 4 37 5 08 5 40 6 15 6 58 7 57 9 20 10 46	H. M. 13 14 14 08 14 56 15 40 16 25 17 12 17 58 18 44 19 32 27 21 38 23 02 12 25 13 20 13 59 14 32 15 03 15 33 16 04 16 36 17 11 17 54 18 46 19 50 21 06 22 33 23 45 12 03	O O
No. of Concession,			MARCI	H,						APRII	4.		
1 2 3 3 4 5 6 6 7 8 8 9 10 11 1 12 1 3 1 1 4 1 5 5 1 6 6 1 7 7 1 8 8 9 2 0 2 2 3 2 4 2 2 5 2 6 2 7 2 8 8 9 3 0 3 1 1	F. Sa. S. M. Tu. W. Th. Sa. S. M. Tu. W. Th. F. Sa. S. M. Tu. W. Th. Sa. S.	H. M. 7 34 8 17 8 55 9 31 10 06 10 40 11 12 11 43 0 42 1 41 2 56 4 33 5 56 6 53 7 31 7 59 8 23 8 46 10 9 36 10 04 11 07 0 09 1 14 2 37 4 08 5 24 6 27 7 11 7 47	H. M. 19 04 20 02 20 54 21 43 22 28 23 10 23 53 12 15 12 49 13 30 14 35 16 14 17 39 18 36 19 24 20 06 20 44 21 21 21 58 22 38 23 10 24 9 13 30 14 55 16 14 17 39 18 36 19 24 20 15 21 58 22 38 23 10 21 58 22 38 23 10 24 9 25 58 26 20 44 27 21 28 26 28 29 38 20 38 20 38 20 38 20 38 21 58 22 38 23 38 23 38 24 58 26 20 48 27 58 28 28 58 29 10 58 20 58 20 58 20 58 21 58 22 38 23 38 23 38 24 58 25 38 26 20 58 27 58 28 58 29 14 56 16 29 17 57 19 03 19 53	H. M. 0 54 1 477 2 32 32 14 30 55 06 5 42 6 20 0 7 00 7 49 9 05 10 44	H. M. 13 09 13 59 14 40 15 20 16 41 17 23 18 06 18 51 12 00 12 54 13 32 14 05 15 36 15 06 15 37 16 10 16 47 17 29 18 20 19 25 20 44 22 10 23 32 12 00 12 58 13 41	0	1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 4 15 16 17 18 19 20 22 23 24 22 5 26 27 28 30	M. Tu. W. Th. Fs. Ss. M. Tu. Tu. Th. Tu. Tu. Tu. Tu. Tu.	H. M. 8 21 8 54 9 25 9 55 10 25 10 55 10 6 21 16 2 24 3 56 5 10 6 01 7 58 26 8 57 39 29 10 04 10 45 0 14 1 22 2 35 5 51 6 32 7 09 7 43	H. M. 20 38 21 21 21 22 03 22 46 23 31 11 26 11 59 12 40 13 49 15 42 17 12 20 22 21 00 21 41 22 26 23 16 11 31 22 13 24 15 00 16 32 17 48 18 49 19 43 20 30	H. M. 2 14 2 50 3 24 3 57 4 30 5 04 5 41 6 22 7 11 8 30 10 10 10 11 28 0 03 0 48 1 24 1 57 2 28 2 58 3 30 4 05 4 46 5 34 6 32 7 39 9 05 10 33 11 44 0 17 1 04 1 45	H. M. 14 19 14 55 15 30 16 06 16 46 17 28 18 13 19 05 20 09 21 36 23 03 12 16 12 57 13 32 14 05 14 37 15 10 15 45 16 28 17 17 18 14 19 19 20 35 21 58 23 16 12 16 13 56	0

The Time used is Atlantic Standard, for the 60th Meridian. It is counted from 0 to 24 hours, from midnight to midnight.

TIDAL DIFFERENCES for the Gulf of St Lawrence, including the north coast of Prince Edward island and Cabot strait as far as Sydney, are given on page 9.

								-					
			3	MAY.						J	UNE.		
te.	°,	HIGH \	VATER.	Low V	VATER.	Moon.	te.		High V	VATER.	Low V	VATER.	Moon.
Date.	Day.	Morn'g.	After'n,	Morn'g.	After'n.	Mc	Date.	Day.	Morn'g.	After'n.	Morn'g.	After'n.	Me
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The Time used is Atlantic Standard, for the 60th Meridian. It is counted from 0 to 24 hours, from midnight to midnight.

TIDAL DIFFERENCES for the Gulf of St. Lawrence, including the north coast of Prince Edward island and Cabot strait as far as Sydney, are given on page 9.

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The Time used is Atlantic Standard, for the 60th Meridian. It is counted from 0 to 24 hours, from mid-

night to midnight.

TIDAL DIFFERENCES for the Gulf of St. Lawrence, including the north coast of Prince Edward island and Cabot strait as far as Sydney, are given on page 9.

BELLE ISLE STRAIT .- TIDAL STREAMS AND DOMINANT FLOW.

While under the control of the tide alone, it will turn regularly and run with equal strength in each direction; the flood setting westward and the ebb eastward. But in addition to this tidal fluctuation, the water has almost always a tendency to make through the strait in one direction more than in the other. While the tidal fluctuation goes on uninterruptedly, the water is thus making a continuous gain to the westward, or to the eastward, as the case may be. This over-balance in one direction we may term the element of dominant flow which is super-imposed upon the usual tidal elements. It gives rise to much complication, as it is large in relation to the strength of the tidal streams, especially at the neaps when weak.

Cause of the dominant flow.—It must not be hastily assumed that the wind is the cause of the dominant flow. There is no evident relation between the direction of this flow and the local wind, to show that one is the cause of the other. The wind would produce primarily a surface drift, whereas the dominant flow affects the whole body of the water. Examples of a true wind drift have been met with in the strait; but they are rare in the summer season, as the winds are not heavy enough or sufficiently long continued to cause the surface drift to extend to any great depth. It is also to be noted that the dominant flow may continue for a week or more at a time in the one direction, which a wind drift would not do. The probable causes are fully discussed in the Report on Belle Isle strait.

Practical indications of the direction of the dominant flow.—The probable direction of the flow may be inferred from the general weather conditions of the region and from the presence or absence of floating icebergs in the strait. It may be taken for granted that there are always some icebergs in the offing of the strait, or eastward in the Atlantic. If a westward flow is dominant at the time, the icebergs, while drifted up and down by the tidal streams, will make their way into the strait; whereas if an eastward flow is dominant, the strait will be free from bergs which are afloat. It is to be noted that this indication is quite independent of what may be the cause of the flow.

To take advantage of this indication, the mariner must be able to distinguish with a fair degree of certainty, the icebergs which are afloat. If they are close to either shore, they are sure to be aground; and they may have been there for a week or more. A berg towards the north side of the strait is more likely to be afloat, as the water there is deeper. In the middle part of the strait, any berg will ground if large enough. It is there a question of size, and the probability of its being aground is stronger if it is at a position where the water shallows to the westward, or if it is over the Centre Bank. The smaller bergs, well clear of the shore, are of course the most likely to be afloat.

The best indications of practical value, including the influence of weather conditions, may be summarized as follows:—

- (1.) If the strait is clear of floating icebergs; and if the barometer is well up and rising, or high and steady; the probability is that the dominant flow is EASTWARD. It may amount at the most to $1\frac{1}{2}$ knots. The usual ebb velocity is increased by the amount of this flow, and the flood is decreased or may be reversed by it.
- (2.) If there are icebergs in the strait which are afloat; and if a low pressure area is passing to the southward, indicated by broken weather; the probability is that the dominant flow is WESTWARD. It is almost certainly so, after a gale from the north or northeast. It may amount at the most to $1\frac{3}{4}$ knots. The usual flood velocity is increased by the amount of this flow, and the ebb is decreased or reversed by it.
- (3.) The direction of the local wind in the strait, and the temperature of the water, cannot be counted upon as reliable indications of the direction of the dominant flow.
- (4.) It appears probable that on the whole there is more westward flow in the early part of the season, in May and June; that although less pronounced in the summer, there is then usually more to the eastward; and that from September onward there is more westward flow. This would correspond with the indications above given, as the weather is apt to be more stormy as the season advances.

INFORMATION ON CURRENTS.

THE GASPÉ CURRENT.

The following description refers chiefly to the region extending from Fame point to Cape Gaspé; as it is there that vessels make and leave the Gaspé coast on all routes which lead into the St. Lawrence. It is based upon investigations made by Dr. W. B. Dawson in July and September, 1895.

The usual current.—While ordinary weather prevails, the current in the offing of the Gaspé coast runs constantly to the S.E. and S.S.E. (magnetic) or outwards from the St. Lawrence to the Gulf. In the vicinity of Fame point, it usually occupies a belt of about 12 miles in width, lying between 2 and 14 miles off shore. This belt appears to become narrower and the current stronger towards Cape Rosier, and between it and the shore there are tidal streams in both directions. In passing Cape Gaspé it keeps closer to the shore, cutting off the in-shore streams, and its direction there varies from S.S.E. to S.S.W. The speed of this current usually ranges from one to two knots; the highest observed being 2:81 knots per hour.

Displacement of the current.—The main current setting south-eastward was found at times to lie in the middle of the passage between the Gaspé coast and Anticosti. When the current is in this position, the area between it and the Gaspé coast may be occupied by weak and fluctuating currents, or even by a reverse current setting inwards. This position of the current in the middle of the passage must therefore be regarded as a displacement of the current, or an alternative route which it may take.

Tidal influence.—When the current runs constantly in one direction, whatever position it may take, and whether it runs in its usual south-eastward direction or is reversed, it is always subject to a fluctuation in speed which corresponds with the tide. When the current has its usual outward direction, it is strongest at low water and weakest at high water; but when the current runs inwards the reverse is the case.

Influence of the wind.—It appears probable that the chief reason that this current keeps along the Gaspé coastr is because the prevailing winds on the Lower St. Lawrence are towards the south-east side. The current appears to be kept away from the coast and to be most disturbed when the winds are from the southward of west (magnetic) on the Lower St. Lawrence, and at the same time south or south-east in the Gaspé region; as they then have an off-shore direction along that part of the coast which the Gaspé current usually follows.

CURRENT IN BELLE ISLE STRAIT.

This strait has a width of 10 to 18 miles for 50 miles of its length, beyond which it widens rapidly in both directions. The currents were examined by Dr. Dawson in July and September, 1894, and throughout the season of 1906, which enables the following summary to be given.

Character of the current.—The current is primarily of a tidal character; the typical or standard movement of the water consisting of tidal streams which are nearly equal in the two directions, during flood and ebb. The flood sets westward or inward from the ocean, and the ebb sets eastward. These tidal streams vary in the usual way from springs to neaps, and they are also subject at times to a large diurnal inequality which follows the change in the moon's declination.

Dominant flow.—While the tidal fluctuation goes on continuously, the water usually makes on the whole in one direction or the other through the strait. This preponderance of flow will sometimes attain such strength as to overcome and reverse the ordinary tidal streams.

Strength.—When the current is equal in the two directions, the velocity at spring tides is 1.50 knots per hour each way, and at neap tides 0.63 knot, on the average. When the tidal streams are most unequal, owing to diurnal inequality, the velocity may amount to $2\frac{1}{4}$ knots in one direction or the other. In addition, there may be dominant flow; its greatest observed velocity, apart from tidal fluctuation, being $1\frac{3}{4}$ knots westward, and $1\frac{1}{3}$ knots eastward. As a result of a combination of these elements, the extreme velocities observed were 3.45 knots westward and 2.53 knots eastward.

Wind disturbance.—The disturbance of the current, caused by the direct action of the wind, is remarkably little considering the situation of this strait. The tidal streams, as they turn, often set directly against the wind. The dominant flow cannot be considered to be a direct result of the local wind in the strait, as it does not usually have the same direction as the wind.

Temperature.—The temperature of the water does not afford a reliable indication of the direction of the tidal streams or of the dominant flow at the time; nor can reliance be placed on the water temperature to indicate the proximity of icebergs.

CURRENTS OFF THE SOUTH AND EAST COASTS OF NEWFOUNDLAND.

From investigations made by Dr. Dawson during the season of 1903, from May to September; by means of a steamer anchored at various points in the vicinity of the steamship route, which passes south of Newfoundland.

General character.—When more than five miles from shore, there are no currents at any time throughout the season which exceed one knot in any direction. The only exception to this is the Labrador current along the east coast, in which a maximum speed of 1.15 knots was observed. This emphatically contradicts the statements so often made, that strong currents are here met with.

Tidal influence.—On the south coast, when within four or five miles of the shore, the current is chiefly governed by the tide, and sets in the two opposite directions alternately; but the farther out the point of observation, the greater the tendency for the direction of the current to veer completely around the compass.

General set and indraught.—The water makes westward on the whole, along the south coast, from Cape Race towards Placentia bay; that is to say, when a long average is taken, the set is more frequently in that direction than in any other. With regard to indraught towards the bays, the water makes inwards on the whole on the eastern side of Placentia bay, in the same sense that it makes westward along the south coast. A corresponding indraught is felt at certain times of the tide, on the east side of St. Marys bay. As already noted regarding the currents in general, these indraughts do not exceed one knot at an offing of five miles or more.

The Labrador current.—This current sets very constantly to the south-west, for a width of 30 or 40 miles off the eastern coast. During times of disturbance, it may set south-eastward, or even be reversed on the surface. When such disturbance occurs, it is usually for part of a day immediately before a gale comes on. It shows a fluctuation in speed with the tide, similar in description to the Gaspé current; being stronger during the flood tide, and weaker during the ebb.

CURRENTS AT THE ENTRANCE OF THE BAY OF FUNDY.

From investigations made by Dr. Dawson throughout the two seasons of 1904 and 1907, from May to September; by means of a steamer anchored at a number of points, at $3\frac{1}{2}$ to 18 miles from shore, on the routes usually taken by steamships, in the region extending from St. John to Cape Sable.

General character.—The currents are predominantly tidal in their character, running strongly during flood and ebb in the two directions, which are usually opposite. Any veering, or set in a cross direction, occurs only when the current is weak. At the points farther from shore, the current veers more in turning and does not reverse its direction so promptly. The time of slack water has a definite relation to the tide at St. John, N.B., and it can be found from the St. John tide tables by the use of constant differences, which are given in the published pamphlet on this region.

Influence of the moon.—In this region the moon's distance, as it varies from perigee to apogee, alters the strength of the currents quite as markedly as the change from springs to neaps with the moon's phases.

Disturbance.—Almost everywhere, the current is as strong down to a depth of 30 fathoms as it is on the surface; and at most places it turns in direction on the surface and below at practically the same time. This has an important bearing on wind disturbance, as it shows that the current will soon regain its normal direction and strength after a storm moderates.

Special note.—The characteristic of the current which deserves special attention, is the change found at points only a few miles apart. The behaviour of the current is very regular and constant at any definitely fixed point; but a change in position of even a few miles may make a marked difference in its character. This difference is chiefly in the strength and in the time of slack water, and not so much in the direction. In passing islands, the strength may be very different indeed, according to the offing given; and in channels and passages there may be a difference, between the centre and the sides, of an hour in the time of slack water.

FULL INFORMATION PUBLISHED IN THE REPORTS.

The information here given regarding the currents in the above regions, is a brief summary made from the Reports issued by this Survey. In these reports, full information is given for the various localities in detail, and the nature of the currents is illustrated by charts and plates. The titles of these reports will be found in the list on page 4; and copies may be had on application to the Department of the Naval Service.







Sh. W. 4.66

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